Connections Between Information Processing Styles and Influencing Strategies in the Workplace

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This thesis is presented in partial fulfillment of the requirements for the degree of Bachelor of Psychology (Honours), Murdoch University, 2012.
I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary educational institution.

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Mindy Lee
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Thesis Title: Connections Between Information Processing Styles and Influencing Strategies in the Workplace

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Abstract

The relationship between information processing styles and influencing strategies has not been examined by any previous studies. However, thinking styles have been associated with leadership styles, and leadership styles have also been related to the use of influencing strategies. Therefore it was predicted information processing, as described by the Cognitive Experiential Self Theory, and influencing styles would be connected. Participants (N = 142) completed three questionnaires; the Rational Experiential Inventory (REI), the Constructive Thinking Inventory (CTI), and the Extended Influence Behavior Questionnaire (EIBQ). Results showed significant positive correlations between rational thinking and the core influencing strategies, as well as behavioral coping with the core influencing strategies. Regression analyses showed that information processing and constructive thinking accounted for a significant amount of variance in rational persuasion and inspirational appeals. Some demographic differences between gender and occupation were also found. Future research could seek to investigate any causal relationships that might be present between information processing and influencing strategies.

Keywords: information processing, influencing, CTI, REI, EIBQ
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Connections Between Information Processing Styles and Influencing Strategies in the Workplace

Influencing strategies hold great importance within workers of any organization. The use of effective strategies can result in support, consent and commitment to requests (Yukl, 2002). On the other hand, ineffective tactics may result in resistance from others (Falbe & Yukl, 1992), leading to lower productivity. Knowing that using different influencing tactics are likely to produce different outcomes, it is also important to know what factors affect the way in which people try to influence others, such as whether the styles of influence that people use in the workplace may be related to how they think. A study by Kemmelmeier (2010) suggested that there is a link between experiential thinking style and authoritarianism behaviors such as aggressing towards those who challenge conventions. This advocates a possible connection between thinking styles and preference for certain influencing techniques.

Figure 1 summarizes the relationships found in previous literature between leadership and influencing styles, and leadership and thinking styles. The single direction arrow between information processing and constructive thinking and leadership indicates evidence of a causal relationship as demonstrated by Cerni, Curtis and Colmar (2010). The bi-directional arrow between leadership and influencing describes the correlational relationship between the two, as supported by previous studies (e.g. Charbonneau, 2004; McDowall-Long, 2006). A dotted arrow is used to show the unknown relationship between thinking and influencing, which is what I will be examining in this study. Since thinking and leadership have a strong relationship and leadership also has a relationship with influencing, it is reasonable to expect a relationship between thinking and influencing.
Much of the research in this study was guided by a global theory of personality called cognitive-experiential self-theory (CEST; Epstein, 1990, 1991). According to this theory, there are two information-processing systems that direct behavior: a rational system and an experiential system. These systems generally engage in integrated interaction but can sometimes conflict with each other hence producing a struggle between thoughts and feelings (Denes-Raj & Epstein, 1994).

CEST proposes that the rational system functions mainly at the conscious level and is slow, intentional and analytic. The rational system is an abstract system that functions by encoding situations into symbols, words and numbers (Epstein et al., 1996) that are transmitted culturally, such as through education (Sladek, Bond & Phillips, 2010). It demands higher levels of cognitive resources, is considered to be slow, reasoned and deliberate. Behaviors are also mediated by the conscious
evaluation of events (Sladek et al., 2010), evidence and logical connections and can change fairly quickly given changes in the strength of an argument or new evidence (Epstein, 1991). Although the rational system can operate at high levels of abstraction, according to Epstein (1998a), the rational system is not as efficient or effective in responding to everyday situations as the experiential system.

By contrast with the rational system, the experiential system is deemed to be effortless, automatic and intuitive, operating mostly at the unconscious level. It is closely related to affect and learns directly from experiences of pleasure or pain (Epstein et al., 1996), therefore it is considered to be an adaptive system (Sladek et al., 2010). Due to this learning process, the experiential system mediates behavior by encoding previous outcomes, particularly those related to the experience of affect, therefore resulting in the avoidance of negative, and the facilitation of positive emotions (Sladek et al., 2010). At lower levels of operation, the experiential system is able to process both simple and complex information spontaneously and rapidly by crude differentiation such as using generalizations and stereotypical thinking (Epstein, 1998a). Epstein (1994) also suggests that at higher levels of operation, and even more so when interacting with the rational system, the experiential system is capable of making valuable contributions to insight and imagination that are often based on feelings rather than hard evidence.

In different situations, the degree of influence from each system can range from minimal to almost fully dominant. This depends on various factors including individual preference for relying on one system more than the other, the extent to which the situation is related to an accustomed style of responding (e.g., scientific problems are commonly approached by the rational system while interpersonal problems are often tackled by the experiential system), and the level of emotional
involvement and relevant experience (Anderson, 1982; Handley, Newstead & Wright, 2000).

An example of how the CEST demonstrates the effect of different cognitive processing styles on behavior is shown in jurors’ decision-making. Justin, Gunnell and Ceci (2010) found that individuals who had a stronger preference for use of their experiential system in thinking were more likely to convict less attractive defendants and recommend for them harsher sentences. People with a preference for rational thinking, however, did not convict or sentence attractive and less attractive defendants differently. These results show some association between thinking styles and behavioral pattern tendencies. In this study, I will be investigating the relationships between cognitive processing styles and patterns in the use of influencing tactics by rational and experiential thinkers.

**Influence Tactics and Use in the Workplace**

The use of influence tactics in the workplace is frequent among workers at all levels. Influence processes are important for understanding how managers within the organization motivate subordinates, make decisions, and obtain support from lateral, upward and downward directions (Falbe & Yukl, 1992). Contextual factors and individual differences determine which influence tactics an individual chooses to use, under what circumstances they choose to use them, and how effective the tactic of choice will be (Higgins, Judge & Ferris, 2003). Therefore, besides direction of the influence attempt, there are other factors that affect the use and effectiveness of influence tactics such as particular objectives of the influence attempt, relative power of the parties, political skill of the influencer (Falbe & Yukl, 1992), and the target person’s attitude towards the proposal (Yukl, Kim & Chavez, 1999).
Most research has focused on identifying which influencing strategies are more effective than others, and also which are the tactics different types of leaders tend to use. Table 1 provides definitions of the 11 influencing strategies outlined by Yukl, Seifert and Chavez (2008).
Table 1.

**Definition of the 11 influence tactics assessed in the EIBQ**

<table>
<thead>
<tr>
<th>Influence Tactics</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>Rational Persuasion</td>
<td>The agent uses logical arguments and factual evidence to show that a request of proposal is feasible and relevant for important task objectives.</td>
</tr>
<tr>
<td>Consultation</td>
<td>The agent asks the target person to suggest improvements or help plan a proposed activity or change for which the target person’s support is desired.</td>
</tr>
<tr>
<td>Inspirational appeals</td>
<td>The agent appeals to the target’s values and ideals or seeks to arouse the target person’s emotions to gain commitment for a request or proposal.</td>
</tr>
<tr>
<td>Collaboration</td>
<td>The target offers to provide assistance or necessary resources if the target will carry out a request or approve a proposed change.</td>
</tr>
<tr>
<td>Apprising</td>
<td>The agent explains how carrying out a request or supporting a proposal will benefit the target personally or help to advance the target’s career.</td>
</tr>
<tr>
<td>Ingratiation</td>
<td>The agent uses praise and flattery before or during an attempt to influence the target person to carry out a request or support a proposal.</td>
</tr>
<tr>
<td>Personal appeals</td>
<td>The agent asks the target to carry out a request or support a proposal out of friendship, or asks for a personal favor before saying what it is.</td>
</tr>
<tr>
<td>Exchange</td>
<td>The agent offers something the target person wants, or offers to reciprocate at a later time, if the target will do what the agent requests.</td>
</tr>
<tr>
<td>Legitimating tactics</td>
<td>The agent seeks to establish the legitimacy of a request or to verify that he/she has the authority to make it.</td>
</tr>
<tr>
<td>Pressure</td>
<td>The agent uses demands, threats, frequent checking, or persistent reminders to influence the target to do something.</td>
</tr>
<tr>
<td>Coalition tactics</td>
<td>The agent enlists the aid of others, or uses the support of others, as a way to influence the target to do something.</td>
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</table>

When a person attempts to influence another, it generally results in one of three outcomes: commitment, compliance, or resistance (Yukl, 1989). Commitment refers to the target person enthusiastically and internally agreeing with a decision, and is therefore likely to show initiative and effort in carrying out the request. Compliance occurs when the target person only uses minimal effort in carrying out the request because they feel apathetic about it. Resistance happens when the target person is opposed to the decision and therefore tries to avoid having to carry out the request.

Yukl (2002) identified four core influencing strategies (rational persuasion, consultation, inspirational appeals and collaboration) which are likely to result in the target’s consent to a request. Rational persuasion is widely used and aims to change the target’s beliefs about the proposal through the use of logical arguments and factual evidence (Yukl, 2002). This tactic has been shown to be effective in obtaining commitment regardless of the direction of the attempt (Yukl et al., 1993; Yukl & Tracey, 1992). Furthermore, rational persuasion is also associated with positive evaluation of effectiveness at influencing others by peers (Caldwell & Burger, 1997). Consultation involves a participative approach in which the target is involved in the decision-making process (Yukl, 2002). Inspirational appeals use values and ideals to empower an individual and stimulate emotional responses in the target. This tactic has been found to be effective not only in garnering support for a proposal, but also raising the target’s enthusiasm towards the request (Yukl et al., 1993). Lastly, collaboration involves the offer to assist the target in performing the request so that the task becomes a joint effort. These four core tactics have consistently shown effectiveness in influencing the target and are generally encouraged over the others (Yukl, 2002; Yukl et al., 1993; Yukl & Tracey, 1992).
Yukl and Falbe (1990) found that consultation and rational persuasion were used most frequently in a sample of managers and working MBA students. This was later supported in a study which found that managers were more effective when using the rational persuasion, inspirational appeals and consultation tactics, and less effective when using pressure, coalition and legitimating tactics (Yukl & Tracey, 1992). Similar results were also obtained when the effectiveness of influencing tactics was tested against commitment, compliance and resistance from subordinates (Falbe & Yukl, 1992). Not only does the evidence show more favor towards positive outcomes for core influencing strategies, but it also suggests a positive relationship between effective leaders and the use of core influencing tactics. The relationship between leadership and influencing will be examined in more detail in the next section.

**Leadership and Influencing**

Transformational leadership involves the process of inspiring and motivating others to take on organizational objectives as their own, acting beyond self-interest (Vandenberghe, Stordeur & D’hoore, 2002). In contrast, transactional leaders use extrinsic motivators in the form of rewards or punishments to influence the attitudes and behaviors of others (Hartog & Van Muijen, 1997). McDowall-Long (2006) predicted that leadership styles would be correlated to specific types of social influence tactics, and results from her study supported this hypothesis. It was found that transformational leaders and transactional leaders had higher likelihoods in the use of either ‘soft’ or ‘harsh’ influencing tactics respectively (McDowall-Long, 2006). Soft tactics referred to the use of power-bases such as personal reward to manipulate the behavior and/or attitude of others, while harsh tactics include acts of legitimating as a means of manipulation. Although both transformational and
transactional leadership have a place in certain contextual situations, effective leaders are likely to be able to adapt and use both leadership styles at different times depending on the followers and situation (Robbins et al., 1998). Nevertheless, evidence shows far more connections between transformational leadership and positive outcomes such as increased motivation, job satisfaction (Bommer et al., 2004), well-being (Arnold et al., 2007) and commitment (Geijsel, Sleegers, & van den Berg, 1999), therefore transformational leadership is often deemed as more effective than transactional leadership.

The use of four main influence tactics, rational persuasion, inspirational appeal, consultation and collaboration, have been positively associated with perceptions of transformational leadership (Charbonneau, 2004). According to Charbonneau (2004), rational persuasion and inspirational appeals contributed most significantly to perceptions of transformational leadership in a military sample. Inspirational appeals to values and emotions are an important aspect of charismatic and transformational leadership, and are therefore likely to be used more frequently by effective leaders. In addition, an effective leader is also likely to use consultation tactics frequently as a mechanism for influence through participation. This is achieved by inviting the target person to help in the decision making process, therefore they are likely to identify with the decision and feel a responsibility in ensuring its justification and success.

Adeyemi (1999) claims that managers in high-quality relationships tend to use inspirational appeals, consultation and rational persuasion, and also tend to use higher levels of instrumental, supportive and participative leadership styles. On the other hand, managers in low-quality relationships tend to use legitimating and pressure tactics, and were rated low in participative and supportive leadership styles.
In addition, more commitment and effort was obtained from others when the manager relied less on coalition and exchange tactics (Adeyemi, 1999). In summary, McDowall-Long (2006) found connections between leadership styles and use of ‘soft’ or ‘hard’ influencing tactics while findings from the studies by Charbonneau (2004) and Adeyemi (1999) both suggest that effective leadership is positively associated with the core influencing approaches. The apparent connections between leadership and influencing styles found by multiple studies have partly led to the notion that influencing styles may also have connections with thinking styles.

Leadership and Thinking Styles

One of the reasons why thinking styles have been studied in association with leadership is because should there be a strong correlation between the two, it could imply that training in thinking styles could develop positive leadership behaviors. Before this however, Fiedler’s cognitive resource theory proposed that there was a strong connection between leadership and thinking and leadership effectiveness. In a workplace setting the presence of transformational leaders helps to increase job satisfaction and well-being among workers (Bogler, 2001) and thus reduces the negative effects of unhappy workers such as absenteeism and turnover rates (Shahzad et al., 2011).

Cerni, Curtis and Colmar (2008) conducted a study on experienced school leaders and found a strong positive correlation between the rational system and transformational leadership. On the other hand, the experiential system was weakly correlated with transformational leadership. As mentioned previously, the CEST suggests that the rational system processes information intentionally and analytically whilst the experiential system does so automatically and intuitively (Epstein et al.,
Within the experiential system people can think either constructively or destructively (Epstein, 1998b). Constructive thinking refers to a person’s automatic thinking that enables coping with problems at a minimum cost in stress (Epstein, 1998b). The constructive components of the experiential system include global constructive thinking, emotional coping, behavioral coping, and their respective subscales. The destructive components are personal superstitious thinking, categorical thinking, esoteric thinking, and naïve optimism (Epstein, 2001).

Although the rational system has been associated with transformational leadership, studies have also found that constructive thinking, specifically behavioral coping (a subscale of constructive thinking), is related to transformational leadership (Dubinsky et al., 1995; Humphreys & Zettel, 2002). However, Cernie et al. (2008) also found that global constructive thinking, emotional coping, and behavioral coping were all strongly correlated with transformational leadership. Therefore if transformational leadership is related to the use of core influencing tactics, people who score highly on constructive thinking are also expected to use the core influencing strategies more often.

These results suggest that transformational leadership behaviors can be honed if the rational thinking and constructive thinking skills are improved. This indication was later supported by Cerni et al. (2010) when the results of a 10-week coaching intervention program to produce changes to CEST information-processing systems presented significant improvements in transformational leadership scores. Given that thinking styles have a relationship with leadership behaviors and leadership behaviors have a relationship with influencing styles, it is probable that thinking styles have some association with influencing styles. Therefore if this relationship is prevalent, then it is also possible that training on information-processing systems
might produce significantly more use in core influencing strategies which have been shown to be more effective (e.g. Yukl & Tracey, 1992).

**Influencing and Information Processing Styles**

The connection between information processing and influencing styles has not been directly measured in other studies before. However connections could be expected for example in that people who have a preference to think logically and rationally (rational thinking) cold reasonably be expected to prefer using logical and rational arguments (rational persuasion). Also, constructive thinking underpins emotional intelligence, which is known to be related to interpersonal skills that are needed for effective influence (Wheeler, 2005).

Some research has pointed towards the possibility that certain influence tactics are used due to the individuals’ personalities which cause them to be predisposed to those tactics (Cable & Judge, 2003). Mowday (1978) found that people with higher needs for power and achievement were more likely to use influence tactics, however the study did not include the examination of which specific tactics were more likely to be used. Extraverted people are talkative, expressive, assertive and enjoy interacting with others (Watson & Clark, 1997). Therefore in relation to influence tactics, extraverted people are probably more likely to engage in inspirational appeal, ingratiatation, and personal appeal because these three tactics require positive connection or engagement with others. Goldberg (1990) also suggested that since extraverts are articulate, expressive and dramatic, they are more likely to use inspirational appeal to influence others effectively as it utilizes their individual strengths. Extraverts are also sensitive to rewards (Stewart, 1996), thus making them more likely to use ingratiatory, exchange and apprising behaviors
as they are linked to rewards. Furthermore, extraversion has been linked to transformational leadership (Hautala, 2006; Judge & Bono, 2000). Hence those who score highly in experiential thinking and constructive thinking might be expected to use influence strategies that are more interpersonal, such as inspirational appeals and consultation.

Those who score high on emotional stability are calm and secure whilst emotionally unstable individuals are generally more anxious, emotional and depressed (Wiggins, 1996). People higher in rational and constructive thinking tend to have fewer problems with anxiety and depression – i.e. they are more emotionally stable. Generally, people who are emotionally stable are more likely to use logic and rational persuasion when trying to influence others (Morelli & Andrews, 1980). Nevertheless, Morelli and Andrews (1980) did not directly examine information processing styles. On the other hand, emotional stability scores may be negatively related to the use of inspirational appeal tactics, which require emotionally charged dispositions rather than calmness. Supporting this, Simonton’s study documented many inspirational leaders who were neurotic, including Churchill, Hitler, Lee, Lincoln, Luther and Napoleon. Research has also suggested that managers who scored high on emotional stability used rational persuasion more and were less likely to use inspirational appeal (Cable & Judge, 2003). Based on previous evidence, it is expected that those who score higher in rational and constructive thinking are more likely to use rational persuasion.

According to Mount and Barrick (1995), conscientious individuals are ambitious, practical, careful, organized and task-focused. Based on such characteristics, conscientiousness individuals should be more likely to engage in rational persuasion as a method of influencing (Cable & Judge, 2003). Rational
persuasion as an influence tactic is largely gathering factual evidence then using logical arguments to present them. This tactic is consistent with a careful, practical and organized personality. Also, conscientious individuals are less likely to use personal appeals because this strategy is relationship-focused rather than task-focused. Results from the study done by Cable and Judge (2003) supported these inferences and found that indeed, managers scoring high on conscientiousness were more likely to use rational persuasion and less likely to adopt personal appeal tactics. In several studies, high rational scores were significantly associated with conscientiousness, openness to experience, an absence of neurotic traits, and freedom from cognitive biases (Handley, Newstead & Wright, 2000; Pacini & Epstein, 1999; Toyosawa & Karasawa, 2004). In these same studies, high experiential scores were related to emotional expressivity and susceptibility to heuristic thinking and cognitive biases. Since both rational thinking and rational persuasion share a common connection with the personality variable conscientiousness, it is likely that rational thinking and the rational persuasion influencing tactic are connected.

**Main Hypotheses**

There are several hypotheses for this study. Given that transformational leadership and conscientiousness are both associated with rational persuasion, and that rational thinking is associated with both transformational leadership and conscientiousness, it is predicted that rational thinking will be positively associated with rational persuasion. Also, since transformational leadership has been associated with constructive thinking and influencing strategies such as inspirational appeals and the personality trait extraversion is also related to both, experiential thinking and constructive thinking is expected to be positively related to core tactics such as
inspirational appeals. I am also expecting to find positive connections between constructive thinking and the other core influencing styles as constructive thinking has been shown to predict effective leadership behaviors and effective leadership is associated with the core influencing strategies.

**Demographic Differences and Additional Hypotheses**

This study will also record demographic data about the participants and examine potential demographic differences that may exist. As background to this, there are some demographic differences in the use of influencing styles that have been found in previous research, which I will briefly outline. The relationship between demographics such as gender, education and culture with leadership or influencing behavior is not always clear because of the conflicting evidence that continues to surface. Eagly and Johnson (1990) found that men were more likely to have task-oriented, direct and controlling styles whereas women were more likely to have interpersonal leadership styles. From this, we would expect that men are more likely to use more task-oriented and controlling influencing styles such as rational persuasion and legitimating while women may be more likely to engage in consultation, pressure and personal appeals. Results from the study by Barbuto, Fritz and Matkin (2007) found that women were indeed more likely to use the pressure tactic, however significant relationships between gender and other influencing tactics were not found. Although gender alone did not affect transactional and transformational leadership, there were differences when combined with low levels of education (Barbuto et al., 2007).

Cultural difference is an area which has been widely studied across different fields and topics. Cultural values can profoundly affect an individual’s attitudes and
behaviors (Schwartz, 1994). For example, Asian cultures (e.g. China, Singapore and Malaysia) have greater values for collectivism and relatedness, long-term orientation and maintaining face by keeping and showing respect. Non-Asian cultures such as in Australia, Britain and America are generally more individualistic, democratic, egalitarian and short-term oriented (del Prado et al., 2007). Due to these differences in values, it is expected that different influencing strategies are favored over others within each culture. Multiple studies have compared the United States to other Asian countries such as Japan (Rao, Hashimoto & Rao, 1997), Taiwan (Schmidt & Yeh, 1992), Hong Kong (Schermherhorn & Bond, 1991) and China (Fu & Yukl, 2000). These studies have all found evidence that culture does have an effect on influencing behavior. Some typical differences are that US managers rated rational persuasion and exchange as more effective while Asian managers were preferred assertiveness, coalition tactics, legitimating, apprising tactics as well as gift-giving. In the current study, the examination of any demographic differences is being made with a relatively recent measure of organizational influencing strategies which none of the above studies have used before and may consequently provide insight on more current demographic differences, if any.

Hence, it is anticipated that there will be differences in the use of influencing strategies between gender, occupation and nationality groups. It is predicted that men will use ‘hard’ tactics more frequently while women are more inclined to use ‘soft’ tactics. Those holding higher level jobs are expected to use the core influencing tactics more than those in lower level jobs. It is also predicted that the non-Asian group will engage in rational persuasion and exchange more frequently, while the Asian group will use coalition tactics, pressure and apprising more often.
Methods

Design

This study employs a correlational design looking at relationships between information processing styles, measured by the Rational Experiential Inventory and the Constructive Thinking Inventory, and influencing styles which were measured by the Extended Influence Behavior Questionnaire.

Participants

A total of 192 participants took part in the study, of which 30 were removed for not having met the criteria of being employed within the last six months. Of the 162 participants, 69 were male and 93 were female. Their mean age was 30.9 years with a range of 17 years to 68 years. 94 participants were of Asian nationality from countries such as Singapore, Malaysia and Indonesia, while 68 participants were of non-Asian nationality from countries such as Australia and America. The majority of participants were employed full-time (50%), 24.7% of participants were employed part-time and 24.1% were employed at a casual level.

Measures

Rational Experiential Inventory (REI). The REI (Pacini & Epstein, 1999) is a self-report questionnaire measuring preference for rational and experiential thinking styles. It consists of 40 short statements about feelings, beliefs and behaviors. Ratings used a 5-point Likert scale with descriptors as 1 = definitely false, 2 = mostly false, 3 = undecided or equally true and false, 4 = mostly true, and 5 = definitely true. Eighteen out of the 40 items are reverse scored. The questionnaire consists of four 10-item subscales: rational engagement, rational ability, experiential
engagement and experiential ability. These four subscales can collate to form total rational and experiential scores. A sample item from each of these subscales are listed as follows:

1. I prefer complex to simple problems (rational engagement)
2. I usually have clear, explainable reasons for my decisions (rational ability)
3. I like to rely on my intuitive impressions (experiential engagement)
4. When it comes to trusting people, I can usually rely on my gut feelings (experiential ability)

The REI has been found to be reliable and satisfactory in regards to its psychometric properties (Björklund & Bäckström, 2008). In this study, Cronbach’s alpha for rational score, experiential score and their respective subscales ranged from 0.71 to 0.89. In addition, total rational and experiential scores were uncorrelated ($r = -.05, p = .56$), showing support for the independence of the rational and experiential systems.

*Constructive Thinking Inventory (CTI).* The CTI (Epstein, 2001) is a 108-item self-report questionnaire measuring constructive thinking. A 5-point Likert scale is used to rate the short statements about feelings, beliefs and behaviors. The descriptors used in the Likert scale were the same as for the REI and the scale was anchored with 1 = definitely false and 5 = definitely true. Participants responded to each statement by indicating to what extent they usually think in certain ways, which are considered as constructive or destructive (Epstein, 1998). The CTI gives insight into a global constructive thinking scale as well as six other main scales: emotional coping, behavioral coping, personal superstitious thinking, categorical thinking, esoteric thinking, and naive optimism. The global constructive thinking scale is a broad scale that includes items from all of the main scales except esoteric thinking.
Items within the global constructive thinking scale are suggestive of both constructive and destructive thinking, with more positive scores reflecting more constructive thinking. An example item from each of the main scales are listed as follows:

1. I get so distressed when I notice that I am doing poorly in something that it makes me do worse (global constructive thinking - reversed)
2. I don’t let little things bother me (emotional coping)
3. When I realize I have made a mistake, I usually take immediate action to correct it (behavioral coping)
4. If something good happens to me, I tend to assume it was luck (personal superstitious thinking)
5. I feel that if people treat you badly, you should treat them the same way (categorical thinking)
6. I believe the moon or the stars can affect people’s thinking (esoteric thinking)
7. I believe almost all people are basically good at heart (naïve optimism)

There are also two built-in lie scales in the CTI: defensiveness and validity. These lie scales are used as benchmarks for determining the validity of CTI scores (Epstein, 2001). According to Epstein (2001), the reliability coefficients for the 108-item version CTI were considered to be good, with Cronbach’s coefficient alphas ranging from 0.76 to 0.92. The internal reliability coefficients for the CTI scales derived from the current study ranged from 0.62 to 0.94, with the exception of personal superstitious thinking (α = -0.76), categorical thinking (α = 0.52), and its subscales distrust of others (α = -0.27) and intolerance (α = 0.57). These scales were excluded from further analysis.
Extended Influence Behavior Questionnaire – Self (EIBQ). For the purposes of the current study, this version of the EIBQ was adjusted so that participants could report on themselves rather than on others. The EIBQ (Yukl & Seifert, 2002 as cited in Yukl, Seifert & Chavez, 2008) includes two additional influence tactics from the original Influence Behavior Questionnaire, assessing a total of 11 tactics. The scale may be divided into court tactics and other tactics. The four core influence tactics are rational persuasion, inspirational appeal, collaboration, and consultation. Higher scores for these are ideal (Yukl et al., 2008). The other tactics include exchange, apprising, ingratiation, personal appeals, legitimating, pressure and coalition, with the latter three being the least effective and thus lower scores are ideal (Yukl et al., 2008). The EIBQ consists of 44 items equally divided by the 11 influence tactics. Yukl et al. (2008) define each of the influence tactics as shown previously in Table 1.

Participants were required to rate how frequently they use a tactic. The descriptors used in this 5-point Likert scale were 1 = I don’t remember ever using this tactic, 2 = I very seldom use this tactic, 3 = I occasionally use this tactic, 4 = I use this tactic moderately often, and 5 = I use this tactic very often. Yukl et al. (2008) showed positive support for the convergent and discriminant validity of the EIBQ. Reliabilities for all the influence tactics were found to be above 0.83.

Procedure

Participants were recruited via a number of sources including social networking websites such as Facebook, the Murdoch University Subject Pool, as well as snowballing through personal contacts. All participants were given a direct link that allowed them to complete the survey online. Information about the study was provided and consent was obtained when participants opted to continue by
clicking “next”. The CTI was presented first, followed by the REI and lastly, the EIBQ. The questionnaire had to be completed in one sitting. However completion of the survey was unsupervised and untimed. Participants’ identity remained anonymous throughout the survey except where university psychology students chose to redeem an hour of participation credit. Even then, the student numbers that were provided could not be traced back to the individuals’ responses.

Results

Data screening

The collected data were tested for outliers and none of the responses were found to be outside the acceptable range of 3.29 standard deviations above or below the average. Lie and validity tests were also examined. Scores of 1.5 standard deviations or more below the mean on the validity scale were considered invalid and removed from further analysis. The same was applied to scores of 1.5 standard deviations or more above the mean on the defensiveness scale. Twenty out of the 162 responses were removed from further analysis because their scores were not within the validity or defensiveness scale ranges. Tests of normality were also examined. Four variables were found to be skewed: stereotypical thinking from the CTI and three influence tactics (rational persuasion, pressure and consultation). A square root transformation was therefore applied to the pressure variable, which was positively skewed, while reflected square root transformations were applied to the other three variables, which were negatively skewed. However, for the readers’ ease of interpretation, the untransformed descriptive statistics and direction of correlations for these variables is presented. Although there is likely to be an inflated type I error rate by using a .05 alpha level, because this is an exploratory study, significance
at .05 level is reported. Also, where tables are presented with the 11 influencing styles, the core influencing styles are presented first followed by the non-core influencing styles.

Core Versus Non-Core Tactics

Initial analysis of the data involved the use of Pearson’s correlations to find connections between main scale variables and the core and non-core influencing tactics. Core influencing tactics included rational persuasion, consultation, inspirational appeal and collaboration, and these were summed to make a single variable. The other seven tactics were categorized under non-core tactics and these were also summed to make a single variable.

Table 2.

Overview of the relationship between information processing style and the use of core or non-core influencing tactics

<table>
<thead>
<tr>
<th></th>
<th>Core</th>
<th>Non-Core</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Total</td>
<td>.28**</td>
<td>.20*</td>
</tr>
<tr>
<td>Experiential Total</td>
<td>.18*</td>
<td>.14</td>
</tr>
<tr>
<td>Global Constructive Thinking</td>
<td>.17</td>
<td>-.03</td>
</tr>
<tr>
<td>Emotional Coping</td>
<td>-.01</td>
<td>-.12</td>
</tr>
<tr>
<td>Behavioral Coping</td>
<td>.46**</td>
<td>.22**</td>
</tr>
<tr>
<td>Esoteric Thinking</td>
<td>.02</td>
<td>.09</td>
</tr>
<tr>
<td>Naïve Optimism</td>
<td>.20*</td>
<td>.20*</td>
</tr>
</tbody>
</table>

N = 142. * p < .05. ** p < .01 (2-tailed).
As shown in Table 2, results suggested significant correlations with rational persuasion and behavioral coping for both categories, however the core tactics produced much stronger correlations. The use of Core tactics were also positively correlated to the experiential system. Both categories were significantly correlated with naïve optimism at the .05 alpha level.

**Correlations between REI and EIBQ scores**

To determine the relationship between individuals’ preference for rational or experiential thinking styles and influencing styles, Pearson’s correlations were computed between the REI and EIBQ. Although the subscales of the rational and experiential thinking are presented in the table, the results for the overall scales, rational total and experiential total, are of most interest.
Table 3.

Correlations between information processing style preference and influencing styles.

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>Ra</th>
<th>Re</th>
<th>E</th>
<th>Ea</th>
<th>Ee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Persuasion</td>
<td>.53**</td>
<td>.41**</td>
<td>.55**</td>
<td>.03</td>
<td>-.15</td>
<td>.09</td>
</tr>
<tr>
<td>Consultation</td>
<td>.13</td>
<td>.18*</td>
<td>.05</td>
<td>.24**</td>
<td>.17*</td>
<td>.27**</td>
</tr>
<tr>
<td>Inspirational Appeals</td>
<td>.30**</td>
<td>.27**</td>
<td>.26**</td>
<td>.17*</td>
<td>.06</td>
<td>.24**</td>
</tr>
<tr>
<td>Collaboration</td>
<td>.24**</td>
<td>.26**</td>
<td>.18*</td>
<td>.13</td>
<td>.001</td>
<td>.22**</td>
</tr>
<tr>
<td>Apprising</td>
<td>.25**</td>
<td>.20*</td>
<td>.25**</td>
<td>.19*</td>
<td>.07</td>
<td>.27**</td>
</tr>
<tr>
<td>Ingratiation</td>
<td>.20*</td>
<td>.29**</td>
<td>.07</td>
<td>.08</td>
<td>-.02</td>
<td>.16</td>
</tr>
<tr>
<td>Personal Appeals</td>
<td>-.09</td>
<td>-.10</td>
<td>-.06</td>
<td>.21*</td>
<td>.22*</td>
<td>.16</td>
</tr>
<tr>
<td>Exchange</td>
<td>.12</td>
<td>.17*</td>
<td>.05</td>
<td>.05</td>
<td>.08</td>
<td>.01</td>
</tr>
<tr>
<td>Legitimating</td>
<td>.26**</td>
<td>.25**</td>
<td>.21*</td>
<td>-.002</td>
<td>-.09</td>
<td>.08</td>
</tr>
<tr>
<td>Pressure</td>
<td>-.07</td>
<td>-.03</td>
<td>-.10</td>
<td>.10</td>
<td>.14</td>
<td>.05</td>
</tr>
<tr>
<td>Coalition</td>
<td>.05</td>
<td>.10</td>
<td>-.005</td>
<td>.08</td>
<td>.09</td>
<td>.06</td>
</tr>
</tbody>
</table>

N = 142. * p < .05. ** p < .01 (2-tailed).

Note. R = Rational total, Ra = Rational ability, Re = Rational engagement, E = Experiential total, Ea = Experiential ability, Ee = Experiential engagement.

The results indicated that the rational system was most strongly correlated with rational persuasion and inspirational appeals (See Table 3). The rational system was also significantly correlated with legitimating, apprising, collaboration, but less strongly with ingratiation. The experiential system had the strongest positive correlation with consultation and the total experiential score showed connections with inspirational appeal, apprising and personal appeal (See Table 3). There were no relationships found between the exchange style and either of the information processing systems. Interestingly, rational and experiential thinking were both significantly correlated with three of the four core influencing strategies, but these
information processing strategies were correlated with a smaller proportion of the non-core influencing strategies.

**Correlations between CTI and EIBQ scores**

Pearson’s correlations between the EIBQ and CTI were also computed to examine the relationship between influencing styles and constructive versus destructive thinking. Five of the seven main scales of the CTI were included, as *categorical thinking* and *personal superstitious thinking* were excluded from further analysis due to their lack of reliability.

Table 4.

**Correlations between influencing styles and main scales of the CTI**

<table>
<thead>
<tr>
<th></th>
<th>Global Constructive Thinking</th>
<th>Emotional Coping</th>
<th>Behavioral Coping</th>
<th>Esoteric Thinking</th>
<th>Naïve Optimism</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rational Persuasion</td>
<td>.17*</td>
<td>.08</td>
<td>.39**</td>
<td>-.11</td>
<td>.05</td>
</tr>
<tr>
<td>Consultation</td>
<td>.21**</td>
<td>.12</td>
<td>.31**</td>
<td>.11</td>
<td>.12</td>
</tr>
<tr>
<td>Inspirational Appeals</td>
<td>.05</td>
<td>-.04</td>
<td>.42**</td>
<td>.07</td>
<td>.28**</td>
</tr>
<tr>
<td>Collaboration</td>
<td>.16*</td>
<td>.02</td>
<td>.31**</td>
<td>.04</td>
<td>.12</td>
</tr>
<tr>
<td>Apprising</td>
<td>.15</td>
<td>.07</td>
<td>.32**</td>
<td>.13</td>
<td>.29**</td>
</tr>
<tr>
<td>Ingratiation</td>
<td>.03</td>
<td>-.03</td>
<td>.15</td>
<td>.02</td>
<td>.03</td>
</tr>
<tr>
<td>Personal Appeals</td>
<td>-.15</td>
<td>-.20**</td>
<td>-.004</td>
<td>.14</td>
<td>.20**</td>
</tr>
<tr>
<td>Exchange</td>
<td>-.04</td>
<td>-.08</td>
<td>.07</td>
<td>-.04</td>
<td>-.02</td>
</tr>
<tr>
<td>Legitimating</td>
<td>-.06</td>
<td>-.16*</td>
<td>.24**</td>
<td>.09</td>
<td>.21**</td>
</tr>
<tr>
<td>Pressure</td>
<td>.23**</td>
<td>.22**</td>
<td>.17*</td>
<td>-.08</td>
<td>-.13</td>
</tr>
<tr>
<td>Coalition</td>
<td>-.19*</td>
<td>-.21**</td>
<td>-.05</td>
<td>.17*</td>
<td>.24**</td>
</tr>
</tbody>
</table>

*N = 142. *p < .05. **p < .01 (2-tailed).*
There were significant correlations between global constructive thinking and the influence tactics of rational persuasion, pressure, collaboration, consultation and coalition, with coalition being the only negative correlation (See Table 4). Emotional coping was negatively correlated with legitimating, personal appeals and coalition, but showed a strong positive relationship with the pressure tactic. Results also showed that behavioural coping had relatively strong positive correlations with all the influence tactics except exchange, ingratiation, personal appeals and coalition (See Table 4). Only the coalition tactic was associated with esoteric thinking, however it was not a very strong correlation ($p = .03$). On the other hand, naïve optimism was found to be strongly related to inspirational appeal, legitimating, apprising, personal appeals and coalition, all of which were positively correlated (See Table 4). The relationship between influencing strategies and the subscales of the CTI are presented in Table 5.
Table 5.

Correlations between CTI subscales and influencing tactics.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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<tbody>
<tr>
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<td></td>
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<td></td>
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<tr>
<td>Self Acceptance</td>
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<td>.01</td>
<td>-.05</td>
<td>.04</td>
<td>.05</td>
<td>-.07</td>
<td>-.22**</td>
<td>-.09</td>
<td>-.19*</td>
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<td>-.24**</td>
</tr>
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<td>Absence of Negative</td>
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<td></td>
<td></td>
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<tr>
<td>Overgeneralization</td>
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<td>.15</td>
<td>.02</td>
<td>.05</td>
<td>.06</td>
<td>.09</td>
<td>-.10</td>
<td>-.07</td>
<td>-.17</td>
<td>.20*</td>
<td>-.16</td>
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<td>Non-sensitivity</td>
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<td>.01</td>
<td>.10</td>
<td>.03</td>
<td>-.14</td>
<td>-.05</td>
<td>-.12</td>
<td>.12</td>
<td>-.11</td>
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<td>.18*</td>
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<td>.09</td>
<td>.06</td>
<td>-.10</td>
<td>-.02</td>
<td>-.04</td>
<td>.17*</td>
<td>-.16</td>
</tr>
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<td>Behavioral Coping</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Positive Thinking</td>
<td>.19*</td>
<td>.27**</td>
<td>.41**</td>
<td>.25**</td>
<td>.30**</td>
<td>.14</td>
<td>.10</td>
<td>.04</td>
<td>.18*</td>
<td>.15</td>
<td>.02</td>
</tr>
<tr>
<td>Action Orientation</td>
<td>.39**</td>
<td>.31**</td>
<td>.32**</td>
<td>.31**</td>
<td>.30**</td>
<td>.16</td>
<td>.001</td>
<td>.09</td>
<td>.19*</td>
<td>.18*</td>
<td>-.09</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.41**</td>
<td>.28**</td>
<td>.52**</td>
<td>.30**</td>
<td>.30**</td>
<td>.18*</td>
<td>.01</td>
<td>.08</td>
<td>.32**</td>
<td>.13</td>
<td>.03</td>
</tr>
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<td>Categorical Thinking</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
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<td>Polarized Thinking</td>
<td>.08</td>
<td>-.12</td>
<td>.23**</td>
<td>-.11</td>
<td>.22**</td>
<td>-.01</td>
<td>.23**</td>
<td>.03</td>
<td>.17*</td>
<td>-.32**</td>
<td>.29**</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Formal Superstitious</td>
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<td>.11</td>
<td>.08</td>
<td>.02</td>
<td>.11</td>
<td>-.06</td>
<td>.12</td>
<td>.01</td>
<td>.04</td>
<td>-.02</td>
<td>.13</td>
</tr>
<tr>
<td>Belief in the Unusual</td>
<td>-.16</td>
<td>.09</td>
<td>-.06</td>
<td>-.01</td>
<td>.05</td>
<td>-.03</td>
<td>.07</td>
<td>-.05</td>
<td>.04</td>
<td>.11</td>
<td>.20*</td>
</tr>
<tr>
<td>Naïve Optimism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Over-</td>
<td>.04</td>
<td>.06</td>
<td>.22*</td>
<td>.03</td>
<td>.16</td>
<td>-.06</td>
<td>.18*</td>
<td>.008</td>
<td>.21*</td>
<td>-.16</td>
<td>.26**</td>
</tr>
<tr>
<td>Stereotypical Thinking</td>
<td>.04</td>
<td>.11</td>
<td>.09</td>
<td>.07</td>
<td>.21*</td>
<td>-.10</td>
<td>.12</td>
<td>-.12</td>
<td>-.03</td>
<td>.01</td>
<td>.04</td>
</tr>
<tr>
<td>Pollyanna-ish Thinking</td>
<td>-.01</td>
<td>.13</td>
<td>.22**</td>
<td>.09</td>
<td>.24**</td>
<td>.06</td>
<td>.14</td>
<td>.01</td>
<td>.17</td>
<td>-.12</td>
<td>.24**</td>
</tr>
</tbody>
</table>

$N=142$, *p < .05, **p < .01 (2-tailed).

Note. 1 = Rational persuasion, 2 = Consultation, 3 = Inspirational appeals, 4 = Collaboration, 5 = Apprising, 6 = Ingratiation, 7 = Personal Appeals, 8 = Exchange, 9 = Legitimating, 10 = Pressure, 11 = Coalition
Further examination of the CTI and EIBQ was conducted by comparing the relationships between each influencing tactic and the subscales within the CTI. The results provide evidence that the three subscales of behavioral coping (positive thinking, action orientation and conscientiousness) all had moderately strong positive correlations with the four core influencing tactics and with apprising (See Table 5). The three subscales were also found to be correlated to the legitimating style, however only conscientiousness was significantly correlated with this influencing style at the alpha level of .01. In addition, conscientiousness was found to be significantly related to ingratiating, whilst action orientation was associated with pressure. Nevertheless, both of these connections were fairly weak positive correlations. Negative correlations were found between self-acceptance and two of the influencing tactics – personal appeals and coalition. Another negative correlation was also present between this subscale and the legitimating tactic, however it was not significant at the .01 alpha level. The only significant positive relationship present was with the pressure tactic (See Table 5). None of the subscales of emotional coping were significantly correlated to any of the four core tactics at the .01 alpha level. Out of the four core tactics, only inspirational appeals was found to be significantly correlated to any of the other subscales not already mentioned, including polarized thinking, positive over-optimism and pollyanna-ish thinking. Polarized thinking was also positively associated with apprising, personal appeals and coalition, and negatively correlated with the pressure tactic. None of the esoteric thinking subscales were significantly connected to any of the influencing tactics except for belief in the unusual and coalition. However this was a relatively weak correlation. Also, subscales of the naïve optimism scale had a few notable
relationships with *inspirational appeals, apprising* and *coalition* and weak but significant correlations with *personal appeals* and *legitimating* (See Table 5).

**Regression Analyses – Core Tactics**

To determine the ability of the rational system, experiential system and constructive thinking in predicting different influencing styles, a series of regression analyses were conducted. Both rational and experiential thinking were related to the core influencing styles, but were not significantly correlated to each other ($r = -.07, p = .38$). Therefore, it is possible that both information processing systems together may predict more of the variance in use of influencing strategies than one system alone. Although rational and experiential thinking both produced weak but significant correlations with the main CTI scales, performing a regression analysis would take this into consideration and factor out the overlapping variance in determining significant predictors. This was similar for main CTI scales which were significantly but weakly correlated with each other. Major scales of the REI and CTI which were significantly correlated with the influencing styles were combined as predictors and used in the regression analysis first. However the global constructive thinking scale was used in a separate analysis with the major REI scales due to many of the other CTI main scales being components which make up the global constructive thinking scale, thus producing strong correlational relationships and risking multicollinearity. Next, the major scales of the REI and subscales of the CTI which produced significant correlations with the influencing strategies were combined and used in the regression analysis. Again, to reduce the risk of multicollinearity, subscales were not put in the same analysis as the main scales of the CTI.
Adjusted R squared figures were used in determining the variance explained by each combination of variables. Rational thinking and global constructive thinking together explained 27.2% of the variance in use of the influencing strategy rational persuasion, but only rational thinking was a significant predictor ($\beta = -.51, p < .001$). Combining rational thinking and behavioral coping achieved better predictive indications together by accounting for 31.1% of the variance in rational persuasion, and both were found to be significant predictors. Nevertheless, the best prediction was achieved by combining rational thinking scores with CTI subscales of conscientiousness, positive thinking, action orientation and absence of dwelling. Together these variables predict 32.6% of the variance in rational persuasion.

However, only rational thinking ($\beta = -.40, p < .001$) and conscientiousness ($\beta = -2.87, p = .01$) were significant predictors.

The influencing style consultation was not correlated with rational thinking. The experiential system and global constructive thinking were only able to explain 8.2% of the variance in consultation, both turning out to be significant predictors ($\beta = -.21, p = .01$ and $\beta = -.20, p = .02$, respectively). Experiential thinking and behavioral coping together were the best predictors accounting for 13.2% of the variance in consultation. Results indicated that only behavioral coping was a statistically significant predictor of the consultation tactic ($\beta = -.31, p < .001$), however it is worth noting that experiential thinking was fairly close to meeting the significance criterion in this model ($\beta = -.16, p = .06$). Further examination of the regressions, including CTI subscales (absence of dwelling, positive thinking, action orientation, conscientiousness, polarized thinking, positive over-optimism and pollyanna-ish thinking) which showed correlational significance with consultation, showed that only experiential thinking was a significant predictor ($\beta = -.18, p = .04$).
and these scales were collectively able to explain 12.1% of the variance in the use of this tactic.

The third core tactic, inspirational appeals, was found to be correlated to both the rational and experiential systems, as well as to behavioral coping. Regression analysis revealed that together, rational and experiential thinking were able to explain 11.2% of the variance in inspirational appeal with both rational thinking ($\beta = .31, p < .001$) and experiential thinking ($\beta = .19, p = .02$) as significant predictors, but rational thinking was the stronger one. Rational thinking, experiential thinking, behavioral coping and na"ive optimism combined achieved better prediction, explaining 22.8% of the variance in the inspirational appeal style. In this combination, only rational thinking and behavioral coping were significant predictors ($\beta = .19, p = .03$ and $\beta = .33, p = .001$, respectively). The best prediction was achieved by combining rational thinking, experiential thinking and the CTI subscales of behavioral coping, categorical thinking and na"ive optimism. Together they explained 29.8% of the variance in inspirational appeal. In this analysis, only conscientiousness was a significant predictor ($\beta = .35, p = .001$) while rational thinking was on the borderline but not statistically significant ($\beta = .16, p = .05$).

For the collaboration influencing style rational thinking and global constructive thinking together only explained 6.3% of the variance, and only rational thinking was a significant predictor ($\beta = .21, p = .02$). The best prediction was achieved by combining rational thinking and behavioral coping, accounting for 11.4% of the variance in the collaboration style. However, this time only behavioral coping was a significant predictor ($\beta = .29, p = .001$). Regression analysis for rational thinking and the three subscales of the behavioral coping scale explained 10.5% of the variance in collaboration, but none of the variables were significant predictors.
Information processing styles and constructive thinking were able to account substantial amounts of the variance in each of the core influencing tactics. Interestingly, information processing and constructive thinking accounted over 30% of the variance in rational persuasion and over 20% of the variance in inspirational appeals.

Regression Analyses – Non Core Tactics

As with the four core tactics, the non-core influencing tactics were subjected to regression analyses to determine the predictive ability of the rational and experiential system and constructive thinking. The same procedure was followed for analysis of the non-core tactics as for the core tactics, with significantly correlated major scales of the REI and CTI used first, followed by major scales of the REI and subscales of the CTI.

Rational and experiential thinking together accounted for 9.5% of the variance in apprising, and both were significant predictors (β = .27, \( p = .001 \) and \( β = .21, \ p = .009 \), respectively). Combining rational thinking, experiential thinking, behavioral coping and naïve optimism explained 16.7% of the variance, but only rational thinking (β = .22, \( p = .02 \)) and naïve optimism (β = .20, \( p = .02 \)) were significant predictors. Combining both thinking styles and the subscales of behavioral coping, categorical thinking and naïve optimism resulted in the same predictive ability for apprising, and in this analysis, only rational thinking was a significant predictor (β = .20, \( p = .03 \)).

Only rational thinking and conscientiousness were significantly correlated with ingratiation and together they explained 3.9% of the variance in ingratiation.
Neither of the variables were significant predictors alone when combined with the other ($\beta = .16, p = .08$ and $\beta = .12, p = .17$, respectively).

For the personal appeals influencing style, combining experiential thinking scores with emotional coping and naïve optimism explained 6.9% of the variance. In this analysis experiential thinking ($\beta = .19, p = .03$) and emotional coping ($\beta = -.18, p = .04$) scores, but not naïve optimism ($\beta = .11, p = .22$) were significant predictors. Combining experiential thinking, self-acceptance, polarized thinking and positive over-optimism accounted for 11.7% of the variance in personal appeals. Only experiential thinking ($\beta = .24, p = .004$) and self-acceptance ($\beta = -.22, p = .01$) were found to be significant predictors.

Combining rational thinking ($\beta = .19, p = .04$), emotional coping ($\beta = -.26, p = .005$), behavioral coping ($\beta = .26, p = .02$) and naïve optimism ($\beta = .08, p = .40$) accounted for 14% of the variance in the legitimating influencing style. All but naïve optimism scores were found to be significant predictors of legitimating. Further examination combined rational thinking, self-acceptance, the subscales of behavioral coping, polarized thinking and positive over-optimism which resulted in an explanation of 15.6% of the variance in legitimating. In this analysis self-acceptance was the only significant predictor ($\beta = -.21, p = .02$).

The best combination of predictors for the pressure influencing style included self-acceptance, absence of negative overgeneralization, absence of dwelling, action orientation and polarized thinking, accounting for 12% of the variance in the pressure tactic. However in this combination, only polarized thinking was a significant predictor ($\beta = .28, p = .001$).
For the coalition influencing tactic, combining emotional coping with esoteric thinking and naïve optimism accounted for 6.3% of the variance. In this analysis naïve optimism was a significant predictor ($\beta = .19$, $p = .05$). A larger combination of variables including CTI subscales such as self-acceptance, polarized thinking, belief in the unusual, positive over-optimism and pollyanna-ish thinking explained 13.5% of the variance in coalition. Nevertheless, only self-acceptance was found to be a significant predictor ($\beta = -.20$, $p = .01$). Regressions were not calculated for the exchange influencing tactic because it only had one significant correlation which was with rational ability. Information processing and constructive thinking was able to account for some of the variance in the use of non-core influencing styles, but mostly with lower percentage variance explained than for the core styles.

**Gender, Occupation and Nationality Differences**

The collected data were divided into subgroups based on gender (male, $N = 59$ and female, $N = 83$), occupation (student, $N = 54$ and non-student, $N = 88$) and nationality (Asian, $N = 80$ and non-Asian, $N = 62$). Within the student group, 15 were male and 39 were female. There were equal numbers of males and females in the non-student group. Separate independent sample $t$-tests were run to determine any main effects these subgroups might have on the usage of particular influencing tactics. Because of the chance of type I error, an alpha level of .01 was used in the analysis.
Table 6.

Comparison of mean usage of influence tactics between different gender, occupation and nationality groups.

<table>
<thead>
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<th>Female</th>
<th>Student</th>
<th>Non-Student</th>
<th>Asian</th>
<th>Non-Asian</th>
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<td>15.55*</td>
<td>3.42</td>
<td>15.50</td>
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</tr>
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<td>14.04</td>
<td>3.87</td>
<td>13.46*</td>
<td>3.62</td>
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<td>13.34*</td>
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*Note. Significance is indicated for paired comparisons, i.e., male-female, student-non-student, and Asian-non-Asian. *p < .01 (2-tailed).
As shown in Table 6, there were significant differences between males and females in their use of rational persuasion, inspirational appeal, ingratiation, legitimating and coalition, with males reporting more use of all of these tactics. When comparing the student and non-student subgroup, results showed that the non-student group used the four core influence tactics more frequently than the student group, but only the consultation tactic produced a statistically significant difference (See Table 6). There was also a significant difference in use of legitimating and personal appeals between these two groups, with non-students scoring higher in the former and students scoring higher in the latter. There were no significant differences found between Asian and non-Asian participants in their usage of the different influencing tactics.

Discussion

Although previous research has established the relationship between leadership and influencing (e.g. McDowall-Long, 2006) as well as the relationship between leadership and thinking styles (e.g. Cerni et al., 2008; Dubinsky et al., 1995), the connections between thinking styles and influencing has not been directly examined. The aim of this study was to investigate the relationship between information processing styles described by the CEST and influencing styles outlined by Yukl et al. (2008). Participants’ rational thinking, experiential thinking, constructive thinking and influencing styles were measured with the REI, CTI and EIBQ respectively.

Core Tactics

Rational thinking and behavioral coping, a subscale of constructive thinking, were significantly correlated to the use of core influencing tactics. The dominant
core tactic, rational persuasion, was most strongly correlated with information processing styles. According to Cerni et al. (2008) leaders often exhibit higher rational thinking and constructive thinking scores, and another study found that effective leadership is connected to the use of core influencing strategies (Charbonneau, 2004). However, neither of these studies examined the direct relationship between thinking and influencing styles. Therefore the connection of rational thinking and behavioral coping to the core influence tactics extends on the findings of these previous studies.

According to CEST, the rational system functions analytically and logically, therefore if one has a preference for thinking in that manner; it is likely that the behaviors they manifest to influence others coincide with these thought processes – i.e they would use rational persuasion. This could be explained in that rational thinkers, when facing a problem, tend to use constructive thinking methods to cope as they are able to rationalize the situation logically to produce a solution. Hence it is probable that the attempt to advocate their ideas with others would involve a similar process of logical explanation and presenting of facts and evidence. Results supported the hypothesis that a strong positive correlation exists between rational thinking and rational persuasion.

Regression analyses showed that higher rational thinking and conscientiousness scores were significant predictors of rational persuasion. Previous studies have shown that people with more conscientious personalities are higher in rational thinking (Handley et al., 2000) and use of rational persuasion (Cable & Judge, 2003). Therefore conscientiousness as a behavioral coping mechanism was expected to have a strong positive connection to rational persuasion. Even though the previous studies examined conscientiousness as a personality variable rather than as
a constructive thinking variable, taken together, their results are consistent with those of the present study.

It was also predicted that inspirational appeals would be significantly related to experiential thinking and constructive thinking. Although inspirational appeals were connected to experiential thinking, this tactic was also significantly correlated to rational thinking. The influencing tactic inspirational appeals is consistent with the definition of transformational leadership as it involves inspiring and motivating others. Therefore, consistent with transformational leadership being related to rational thinking and constructive thinking (e.g., Cerni et al., 2010), inspirational appeals were found to be related to both. Nevertheless, it was expected that experiential thinking would have a stronger relationship with inspirational appeals as this influencing strategy requires one’s ability to tap into others’ emotions and values in order to gain commitment. The relationship between experiential thinking and inspirational appeals is highlighted by the relationship between inspirational appeals and constructive thinking, which is part of the experiential system. Aside from the CTI, however, the REI does not differentiate components of experiential thinking. The REI used in the present study (Pacini & Epstein, 1999) principally assesses preference for intuitive thinking in its experiential scale, however, theoretically (Epstein, 1998) experiential thinking also involves emotionality and imagination. Since this study was conducted, a revised version – the REIm – has been developed to divide experiential thinking into three parts: intuition, emotionality, and imagination (Norris & Epstein, 2011). The new REIm’s Experiential scale would be useful in future research to investigate whether the emotionality component of experiential thinking is more closely aligned with inspirational appeals, as might be theoretically expected. Overall the relationship between inspirational appeals and
thinking styles seems to be that a close interaction between the rational and experiential system is needed, and transformational leaders aiming to use this tactic effectively must be adaptive to the situation and target they are dealing with.

For the other two core tactics, consultation was positively related to experiential thinking while collaboration was positively related to rational thinking. Furthermore, both tactics were strongly related to constructive thinking, in particular, to behavioral coping. Studies such as the one by Charbonneau (2004) have established the relationship between core influencing tactics and effective leadership while others have found links between rational thinking and effective leadership (e.g. Cerni et al., 2008). In addition, constructive thinking is also associated with transformational leadership (Dubinsky et al., 1995). Since consultation is a participative approach, good interpersonal skills are needed to maintain high-quality relationships and commitment to requests. This notion is supported in the study by Adeyemi (1999) which found that managers in better relationships tend to use more participative leadership styles and influencing tactics such as consultation. While the quality of relationships was not measured in the current study, information processing was examined directly and the experiential thinking style was found to be related to consultation. Therefore it can be inferred that experiential thinkers are likely to engage in more effective interpersonal interactions, thus be in better relationships that also reinforce the use of participative influencing tactics.

In summary, the results of this study supported the hypothesis that information processing styles is related to the use of core influencing tactics, and constructive thinking is an important predictor in the use of them. Both are particularly evident in the relationship between rational thinking and rational persuasion.
Non-Core Tactics

Results from this study showed significant connections between some non-core influencing tactics and information processing. The apprising tactic showed correlations with rational thinking and constructive thinking (behavioral coping), which was similar to those of the core tactics. Interestingly, personal appeals and coalition were negatively associated with emotional coping, specifically, self-acceptance.

According to Bass (1985), transactional leadership involves two types: contingent reward and management-by-exception. Leaders who have a contingent reward transactional leadership style clarify what is expected from followers and what they will receive if they meet expectations. Hater and Bass (1988) later identified a passive management-by-exception style which refers to leaders who avoid making decisions, are only reactive to problems and usually intervene with criticism and punishment. Following this theory, influencing styles such as apprising and exchange could be categorized under the contingent reward style which is not as advantageous as transformational leadership but still uses rational and constructive thinking to solve problems hence it is desired over the passive management-by-exception style. Judge and Piccolo (2004) concluded that transformational leadership was better than transactional leadership, within which contingent reward was better than management-by-exception, all of which were superior to laissez-faire leadership. Nevertheless rational and constructive thinking was found to be related to the apprising tactic and not the exchange tactic.

The expectancy theory of worker motivation shows that people will work harder if they expect that this will lead to rewards that they want (Vroom, 1964).
However, distant future rewards that do not eventuate easily are not the best motivators. As the apprising tactic involves telling people about future rewards, evidence from this research is consistent with Vroom’s (1964) theory and indicates that although the apprising tactic may not be as effective as some of the other core tactics, it should still be widely used since it is not ineffective or counter-productive. The legitimating tactic also achieved similar connections with rational and constructive thinking, and this may be because of the likelihood of those using this tactic more frequently are in higher level positions, and thus are rational, constructive thinkers or have had training in rational and constructive thinking.

Further analysis of the results again supported the hypothesis that information processing styles would be connected to influencing styles. In contrast to the transformational leadership and contingent reward style, the passive management-by-exception leadership style is consistent with influencing styles like personal appeals, pressure and coalition tactics. In particular, lack of self-acceptance was related to the use of personal appeals and coalition tactics, both of which largely rely on others to gain support. If an individual does not accept themselves as worthy, it is likely that they will not have the confidence to influence someone without seeking the aid of others (e.g. on the basis of their friendship) to reaffirm their request. As these tactics usually reap only compliance or resistance from subordinates (Falbe & Yukl, 1992), it is important to identify predicting variables for these behaviors so that people can avoid them. In the present study, it was found that a lack of constructive thinking in areas such as emotional coping and the use of destructive thinking such as categorical thinking and naïve optimism predicted the use of undesirable influencing strategies.
**Demographic Comparisons**

It was predicted that men would use more ‘hard’ influencing tactics while women would use more ‘soft’ tactics. I also hypothesized that those with higher level jobs would have a higher usage of core influencing strategies. Finally, it was expected that the non-Asian group would show more use of rational persuasion and exchange while the Asian group would show more use of coalition, pressure and apprising tactics. Results only partially supported the first of these three hypotheses. Men were found to use a variety of influencing tactics more frequently including rational persuasion, inspirational appeal, ingratiation, legitimating and coalition. There were more males who were not students than students; therefore it is likely that there are higher-level job holders within the male group. On the other hand, the female group had fairly equal numbers of students and non-students. Thus, there was a confound between gender and occupation. This means that the mean use of ‘soft’ tactics such as inspirational appeals and the other core tactic rational persuasion could have been higher for males because of occupation rather than gender differences.

The non-student group used the consultation and legitimating tactics significantly more than the student group, and also used personal appeals significantly less. The non-student group also showed higher means for the other three core tactics, but these were not statistically significant. It should be noted that the non-student sample contained a lot of managers (30.7%), while students typically have casual and lower-level jobs. As legitimating is the use of one’s authority that comes from that position to make a request, the difference in the use of legitimating is most likely due to non-students having occupations that give them a power position and students having jobs in which they do not have power or authority over
others. Additionally, the difference in occupational roles may also explain the difference in the use of personal appeals. According to the Leader Member Exchange (LMX) theory, leaders make use of close friendships and in-groups, and tend to be more reliant on their in-group of staff (Sparrow & Liden, 1997). Again, with many non-students being managers and most students presumably holding lower-level jobs, it is more likely that non-students would need to engage in the behavior that is typically described by LMX of making use of friendships to achieve work outcomes. Overall, occupation and the level of position seem to have some connections with the use of influencing tactics. Schwarzwald, Koslowsky and Ochana-Levin (2004) compared supervisors and subordinate samples and found that rank and use of power tactics interacted. Although the current study looks at influencing tactics rather than power tactics, both are used to reach similar outcomes – commitment to a request. Results reconfirmed a relationship between occupational position and use of tactics to gain commitment.

There were no significant differences found between Asian and non-Asian nationality groups, which is inconsistent with my hypothesis. Although other studies have found differences between nationalities, most have only compared participants who worked in their own country and the largest differences were found with Asian cultures that were more traditional such as Japan (Rao et al., 1997) and China (Fu & Yukl, 2000). Regarding the current results, a plausible explanation could be that most of the participants of Asian nationality either worked in a non-Asian country, or were working in an Asian country which has a substantial amount of influence from Western cultures (e.g Singapore). It could be inferred that influencing styles is highly adaptive and susceptible to change should an individual be put in a different culture or environment.
Implications and Limitations

The connections between information processing and influencing style had not been examined directly by any previous research. This study provides evidence that such connections exist. Presumably, how our brains process information then results in our manifested behaviors, as shown in the causal relationship between thinking styles and leadership behaviors in other research (Cerni et al., 2010). Although I am not making claims of a causal relationship, it can be assumed that training in thinking styles might produce greater usage of core influencing tactics. Given that influencing tactics are also associated with leadership, it is likely that more effective leadership behaviors will follow. Additionally, facets of thinking styles such as destructive thinking should be discouraged as they promote non-core influencing styles which are consistent with the adverse management-by-exception leadership style.

As this study was conducted in the form of an online survey, there are some limitations including a lack of control for environmental factors. Language proficiency was not tested, so the understanding and/or interpretation of questions may have been different for some participants. One of the challenges of survey research is that each item is subject to interpretation and participant responses may vary if they relate the question to specific situations or experiences. Furthermore, even though the anonymity of responses has been emphasized participants may be more willing to report socially desirable behaviors yet hesitant about reporting less desirable behaviors. Although much of the theoretical and empirical justification for expecting a connection between CEST and influencing comes from the connections of these variables with leadership, this study did not use a specific leadership sample. Future research should consider using a sample of leaders.
Conclusion and Future Directions

This study found that the way people think is connected to their influencing behaviors. In particular, rational thinkers are more likely to use rational persuasion, and constructive thinking is a constant predictor for the use of the core influencing strategies. On the other hand, destructive thinking was related to the use of less effective influencing strategies. In sum, better thinking (i.e., rational and constructive thinking) was related to better (i.e., more effective) influencing and poorer (i.e., destructive) thinking was related to the use of poorer (i.e., less effective) influencing strategies. As mentioned previously, future research should consider using the new REIm as a measure of rational and experiential thinking so that particular components of the experiential system can be linked to influencing styles. Directions for future studies include examining whether a causal relationship exists between information processing and influencing styles, or perhaps exploring any moderating or mediating variables in the triad relationship between information processing, influencing, and leadership styles, such as personality.
References


