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Impact of perceived self-awareness on attributions of social power, moderated by gender

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Abstract

Women are underrepresented in corporate leadership, and while progress is being made, business and academia need a greater understanding of how women can gain access to the type of power that results in the internalisation of influence and the legitimisation of their role as leaders.

The research began by considering the literature around interpersonal power and its significance in the execution of leadership. The defining features of followership, self-awareness, and how these relate to a subjective view of authenticity, were explored, in the context of gendered social construction.

A male-dominated industry was sampled and subordinates rated their leaders on perceived self-awareness and attributions of social power. The data were tested for correlation. The results showed that perceived self-awareness results in increased attributions of social power overall. The soft bases of power derive the most impact on power attributions, and the harsh bases are only attributed for male leaders who are perceived to demonstrate self-awareness. Importantly, perceived self-awareness has the strongest correlation overall with information power attributions for women leaders, which base has been demonstrated to yield the longest-run of internalised influence. This result demonstrates an actionable way for women to gain influence and legitimise themselves as leaders.

Key words:

Social power, influence, followership, self-awareness, authentic leadership, relational authenticity, gender

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

Elicia Demont

Date

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The MBA journey and this research report would not have been possible without the unwavering support, patience and love of my husband, Rob. Thank you for giving me wings, while also looking after the roots.

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Dedication

This research is dedicated to my husband Rob, and my children, Harley and Jasmine, in the spirit of life-long learning.

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CHAPTER 1: Introduction to research problem

The pace of gender transformation in the global workplace is slow (Ezzedeen, Budworth & Baker, 2015), and the disparity is greatest in senior leadership (Yee, Krivkovich, Kutcher, Epstein, Thomas, Finch & Konar, 2016). A case in point is South Africa, where the 16th Commission for Employment Equity (''CEE'') report released in April 2016 reveals that males dominate the private sector at 76.8%, and that they represent 72.8% and 66% at local government level and in national government respectively (Peyper, 2016); yet despite small gains, women remain underrepresented in the corporate pipeline - for every 100 women promoted, 130 men are promoted (Yee et al., 2016).

In response to their marginalisation, certain women develop strategies to become noticeable and sought. These strategies include seeking and accepting risky appointments, the astute refinement of crisis-management skillsets, and the cultivation of repute as a transformation expert (Glass & Cook, 2016); however, women who assert themselves through displays of dominance or authority risk negative evaluations since they are perceived to act outside of their gender role; this contrasts with the typical association of these behaviours with effective leadership (Livingstone, Rosette & Washington, 2012). In fact, women who negotiate or lobby for career advancement are 30% more likely than men who lobby to receive criticism that they are too ''aggressive'' or ''intimidating'' (Yee et al., 2016).

Female leaders are also more likely to experience excessive performance scrutiny, weakening their ability to lead effectively (Ezzedeen et al., 2015; Williams & Tiedens, 2016; Chizema, Kamuriwo & Shinozawa, 2015). A further issue is that the path to leadership is disproportionally stressful for women (Yee et al., 2016) and this may ultimately contribute to their self-selection out of a leadership career (Glass & Cook, 2016). This puts companies at a disadvantage, as those that leverage the talents of the full population have a competitive edge (Yee et al., 2016).

Leadership drives company culture (Biro, 2016). The increasing attention on good corporate governance means that organisational stakeholders are becoming less tolerant of inconsistencies between leaders' espoused principles and values, and conduct (Walumbwa, Avolio, Gardner, Wernsing & Peterson, 2008). Gaining a true, well-honed self-awareness of what makes one tick as a leader and what doesn't will drive one to be far more authentic (Biro, 2016) and thus, it is posited, enable one to

lead more effectively under the conditions that good governance today demands. We all benefit from the agility that comes with being the best versions of our true selves. Self-awareness is an important domain of authentic leadership, and this study aims to show that it is an antecedent to increased social power.

Individuals who are self-aware are also leaders who are adept at regulating their emotions (Lord and Hall, 2015; Ilies, Morgeson & Nahrgang, 2005). Feedback is an important tool for improving performance with the aim of advancement, but according to Yee et al. (2016), women are 20% less likely to receive difficult feedback, with managers expressing concern over triggering an emotional response from women in the feedback process. It is arguable then that increased self-awareness must result in more frequent and quality feedback and therefore the opportunity to improve leadership skill.

‘’Who we are’’ changes over time as we grow through experience; being authentically self-aware therefore requires an element of malleability – relationally authentic, but with a caveat – that the relationality is gender specific.

Social power in the organisational context is not unilateral; power consists of the influence of supervisors over followers, and the acceptance (or lack thereof) by the follower (Aiello et al., 2013). Of challenge to women leaders is that status and legitimacy as antecedents to power are not proportionately bestowed upon women as are to men; gender emerges as a significant dimension of hierarchical differentiation (Magee & Galinsky, 2008).

Existing literature is robust with examinations of the sources of power, however understanding how leaders gain access to these sources of power is an area which is underexplored.

The effect of gender on authenticity is also under-explored in existing leadership literature. The aim of this research is to offer a contribution to the existing body of knowledge on social power theory, by showing that increased embodiment of self-awareness as a sub-construct of authentic leadership has a distinct interplay by gender on the bases of power; understanding this impact can assist in positively legitimising the role of women as leaders.

This outcome will provide a useful means for firms to identify leaders who are lacking in perceived leadership potency. This evidence could be used in the recommendation of further leadership development of said leaders; suggesting that training leaders in

positive social exchange, i.e.in the specific behaviours that will allow them to be influential and effective yet still congenial, could be of value (Ilies et al., 2005).

The logistics industry is widely perceived to be male territory; in fact, McKinsey's Women in the Workplace survey (Yee et al., 2016) found that in the logistics industry, only 13% of C-Suite employees were women – this is the lowest percentage across all industries surveyed. It is critically important then that logistics firms carefully consider the types of managers they choose to recruit and develop. A Delphi survey commissioned by Price Waterhouse and Coopers (''PWC'') (Ruske, Kauschke & von der Gracht, 2012) showed that the logistics industry is not viewed as attractive by the majority of job seekers. This is a problem because it constrains these firms in the recruitment of top talent. Thus, companies that can shed this perception and succeed in attracting and retaining top female talent will penetrate a powerful and fresh labour pool (Ruske et al., 2012). This study will focus on four companies within the logistics industry.

Finally, while many gains have been achieved in the advancement of gender equality, we have not come far enough. Research by Yee et al. (2016) found that African companies with boards that are at least one-quarter female, produce EBIT earnings of 20% in excess of the industry average. Globally, research by Noland, Moran & Kotschwar (2016) together with the Peterson Institute of International Economics, found that companies with at least 30% female representation in leadership, exceeded average net margins by as much as 6%. Importantly then, organisations and business leaders need to accelerate efforts in creating cultures that emphasise equal opportunity for men and women. Power is oft in the eye of the beholder, and women can influence this better. Women can contribute to the interruption of gender bias by breaking the cycle of illegitimacy, through deeper self-awareness.

CHAPTER 2: Literature review

2.1 Power and influence

Many researchers including French & Raven (1959), Carli (1999) and Sturm & Antonakis (2015) define interpersonal power as having the discretion and means to influence others, where what one wills has to do with regulating or controlling aspects of one's environment, including valued resources, outcomes, or others. This social coercion is a force for exercising influence, i.e. influence is an outcome of power (Sturm & Antonakis, 2015).

French and Raven's (1959) work on power and influence is one of two classic models on social power theory which identify that a leader's influence is in part dependent on the target's acceptance of such power. Authentic leaders in particular are expected to champion values and goals for the organisation for which they are responsible; the collective therefore are compelled to understand and acknowledge the leader as a fair representative of their collective interests before granting trust and acceptance to the leader as authentic (Eagly, 2005).

Later expansions on French and Raven's (1959) theory categorised power into eleven bases (Raven, Schwarzwald, & Koslowsky, 1998; Raven, 2008), grouped by two dimensions: the harsh power bases, which include impersonal reward and coercion, legitimacy of position, equity, and reciprocity; and the soft bases which include information, expertise, reference, personal reward and legitimacy of dependence (Raven, Schwarzwald, & Koslowsky, 1998; Raven, 2008; Pierro, Raven, Amato & Belanger, 2013).

The second classic model on social power theory was formulated by Bass (1960), who created a two-dimensional model of power which interprets power along the taxonomies of positional power and personal power, with positional power deriving from the formal position that an influencer holds, and personal power deriving from an influencer's experience, skills and attributes (Zhao, Shang, Lin, Tan, Li & Liu, 2016). The categorisation is closely related to Raven's harsh and soft dimensions.

As discussed, power is an antecedent to influence, and there is a growing acceptance in the leadership literature that the amount and type of influence that a leader is able to exert, is largely shaped by the nature of the shared social identity between organisational leaders and their followers (Subasic, Reynolds, Turner, Veenstra &

Haslam, 2011). While power can be static and stable, in the organisational context it is largely in a state of flux (Jordan, Sivanathan & Galinsky, 2011).

Indeed, these power / interaction models of interpersonal influence consider the agent's motivation for influence and propose that the agent's selection of a power base is dependent on purpose, context, as well as relationship between the influencing agent and the target (Aiello, Pratto & Pierro, 2013). A shared sense of social identity between leaders and followers is likely to result in followers being more intrinsically motivated to pursue group objectives, increasing a leaders capacity to influence; however, if a leader then violates the shared social identity by acting outside of what a follower expects, the leader's influence may be compromised (Subasic et al., 2011).

Leaders need to be mindful of this psychological dynamic when deciding which power base to draw on, as it is pivotal in the process of influence (Aiello et al., 2013; Subasic et al., 2011). Where a leader is viewed as an outsider to the organisational group, he/she would need to resort to coercive power tools as a means of exercising authority to elicit compliance – in fact, the harsher / formal power bases in this instance are somewhat more relationally authentic, as they conform to what the followers would expect from an outsider. On the other hand, leaders who seek regard from socially engaged subordinates, as well as leaders who seek accomplishment, will likely accede to the use of soft / personal power bases (Carli, 1999; Subasic et al. 2011). It is however important that leaders be sensitive to the consequences associated with the use of power.

There are three general consequences of the exercise of power: compliance, identification, and internalization (Kelman, 1961). Kelman's (1961) schema demonstrates that cognitive involvement of the follower lay on a continuum, ranging from compliance to internalisation: compliance is conceptualised as the lowest order, where conformity is superficial without an accompanying change in belief; identification is conceptualised as conformity occurring due to the target wishing to establish or maintain a desired relationship with the agent; and internalization, the highest order, is conceptualized as the influence succeeding due to congruence in values between the target and the agent (Kelman, 1961; Kasulis and Spekman, 1980). Interestingly, Kasulis and Spekman (1980) demonstrated a probabilistic relationship between the power base exercised, and the cognitive involvement of the target. These relationships are summarised in Table 1:

Table 1 - Probabilistic relationship between the bases of power and Kelman's (1961) consequences of an influence attempt (Kasulis and Spekman, 1980) (adapted)

Power base	Dimension	Cognitive outcome	Operationalisation
Coercive	Harsh	Compliance	Lowest level of long-run compliant cooperation
Reward impersonal	Harsh	Compliance	Moderate level of long-run compliant cooperation
Legitimate position	Harsh	Compliance	Highest level of long-run compliant cooperation
Referent	Soft	Identification	Lower level of long-run cooperation by virtue of identification
Expert	Soft	Identification	Higher level of long-run cooperation by virtue of identification
Legitimate dependence	Soft	Internalisation	Lower level of long-run cooperation by virtue of internalisation
Informational	Soft	Internalisation	Higher level of long-run cooperation by virtue of internalisation

Some adaptations were made in defining certain of the power bases. Kasulis and Spekman (1980) defined two legitimacy power bases, being 'legal legitimate' and 'traditional legitimate'. Legal legitimate was described as ''the perceived right of A to dictate to B'' (Kelman, 1961). This is synonymous with Raven et al.s' (1998) definition of legitimate positional power as a supervisor's right to prescribe behaviour together with a subordinate's obligation to conform. 'Legal legitimate' power has therefore been substituted with 'legitimate position' power for purposes of this study.

Traditional legitimacy was described as ''institutionalised behaviour that becomes the accepted norm'' (Kasulis and Spekman, 1980). Raven et al. (1998) define legitimate dependence as a social responsibility norm which obligates persons to assist those who are in need of assistance; 'traditional legitimate' has therefore been substituted with 'legitimate dependence' power for purposes of this study.

Furthermore, the harsh and soft dimensions were included alongside the power bases in the table. The results plainly imply that the harsh power bases elicit the most short-lived behaviors, with coercion being the least effective base of power, whereas the soft bases result in the greatest internalisation of co-operation, with informational power being the most effective. As Steffens et al. (2016) presented, it is the internalisation by a follower that accounts for the impact that a leader has in the organisation, and therefore the soft bases of power are clearly the mark of more effective leaders.

2.2 Formal / harsh power

Formal power relates to ''official position'' and derives its authority from the structure of an organisation and its context (Zhao et al., 2016). The power bases in this groupage include reward power, coercive power, and legitimate power, further categorised into the powers of reciprocity, equity and position (Raven, Schwarzwald & Koslowsky, 1998).

Vial, Napier and Brescoll (2016) argue that the difficulties that female leaders face often stem from low legitimacy perceptions, in that women are less likely than men to be perceived as having the right to exert influence over others (Carli, 1999), i.e. be attributed less formal/harsh power than men, and that the cycle of illegitimacy is self-reinforcing. Vial et al. (2016) define legitimacy as a state in which a leader's power over others is seen as deserved and justified; subordinates follow by choice rather than by force. Although related, power is distinct from status in that power is the property of an actor, whereas status is conferred by observers (Magee & Galinsky, 2008). Status conferred however is largely dependent on the stereotyped role prescription, leading to gender related bias for power attributions (Williams & Tiedens, 2015).

Women are stereotyped as communal and men as agentic, with communality being particularly prescriptive for women, (more so than being agentic is for men). Communal traits include being supportive, sensitive to the needs of others and having the ability to listen, whereas agentic traits include being ambitious, competitive, independent and self-interested (Rudman & Glick, 1999; Chizema, Kamuriwo & Shinozawa, 2016); women are therefore held to a higher standard of 'niceness' and thus are prone to being penalised for seeming violations of these standards (Rudman & Glick, 1999). Powerful women are seen as threatening, and this perceived violation of communion may legitimise discrimination against agentic women, increasing power differentials for subordinates.

A power differential refers to perceptions of the degree to which followers expect that their leaders are likely to rely on coercion, (i.e. the leveraging of harsh power), as a means of eliciting compliance. Along with status, perceptions of power differentials are also an antecedent to leader legitimacy and thus harsh power, with the degree of power differential being inversely correlated to legitimacy perceptions (Vial et al, 2016).

The model employed by Magee & Galinsky (2008) treated actual formal power as relatively fixed. Status was defined as the degree to which a leader is respected and admired by others, and such status having been bestowed or withheld by the subordinate freely (Magee & Frasier, 2014; Magee & Galinsky, 2008). Descriptive

feminine stereotypes (warm, polite, yielding) often portray women as less competent in leading relative to men, and this perceived lack of fit results in women leaders being seen as unworthy of status. Status is a precursor to the legitimacy of power-holders, i.e. the degree to which followers see a power-holder as a legitimate authority depends partly on the level of status attributed, with increasing status ameliorating formal / harsh power perceptions (Vial et al, 2016).

Any factor that increases status attributions, or minimises perceptions of power differentials, would serve to positively legitimise a leaders' formal role. This holds true for all leaders but poses a problem for women leaders; agentic traits are associated with power and status (Rudman & Glick, 2009) and as a result subordinates are inclined to attribute status disproportionately in favour of men, therefore making it more likely for women to be cast as illegitimate (Vial et al, 2016).

Vial et al (2016) highlight a disturbing consequence of low legitimacy perceptions, arguing that subordinate rejection and lack of cooperation can alter leaders' psychological state, which could negatively impact a woman's performance as a leader and her behaviour toward subordinates. At low levels of legitimacy, leaders need to leverage their formal power in a more coercive way in order to elicit compliance by subordinates. Raven (2008) explains that the attitude of the influencing agent towards the target is a motivation which could affect the choice of power strategies; an adverse feeling may lead to the choice of one of the harsher bases of power, such as coercion, even though said strategy may not be the most effectual under the circumstances.

Negative consequences include increased negative behaviour, reduced cooperation and reduced extra role behaviour on the part of the follower, and precarious leader psychology, aggressive behaviour or tentative behaviour on the part of the leader. Coercion specifically carries with it several costs, noteworthy of which being the potential violation of one's personal value system (Raven, 2008). Moreover, the emotional regulation required under these circumstances requires considerable cognitive resources, which is often difficult to master at such times when emotional regulation is most critical (Lord and Hall, 2005).

Vial et al (2016) argue that these leader behaviours further damage legitimacy and trigger a self-reinforcing cycle. What further exacerbates this is that gender stereotypes and the expectation that women are a poor fit for leadership, leaves subordinates vulnerable to confirmation bias and therefore sensitive to any indicators that the female leader may not be competent – again reinforcing the illegitimacy cycle (Vial et al, 2016).

If it holds true that social processes serve to validate a leader's self-view as a leader, and women are less likely to be perceived as legitimate power holders, then women will struggle more so than men to develop the confidence and success to develop a self-view as a leader (Lord & Hall, 2005); but while Vial et al. (2016) argue that two of the negative consequences of increased illegitimacy is reduced cooperation and reduced extra role behaviour on the part of the follower, Walumba et al. (2008) showed that a direct effect of authentic leadership was ''elevated levels of employee commitment, willingness to perform extra role behaviours (e.g. citizenship), and satisfaction with the supervisor among followers" (pg. 105). In fact, Banks et al. (2016) also demonstrated that organisational citizenship behaviour is highly correlated to authentic leadership. It may be fair to propose then that increased self-awareness, an important dimension of authentic leadership, could attenuate the cycle of illegitimacy.

Williams & Tiedens (2015) theorise that women can increase their influence and power by communicating their dominance implicitly rather than explicitly, for example by means of eye contact rather than by direct command; the power of 'suggestion'. Interestingly, they further reason that implicit dominance may actually be better communicated than explicit dominance, with their research having shown that dominance that operates subliminally fails to interrupt social interaction and does not affect likeability. They posit this as a tool for being effective whilst awaiting true gender equality.

Industries that are typically male-dominated, such as the Logistics industry, can emphasise the perceived misfit between what is expected of leaders and what is expected of women, resulting in higher power differentials and consequently lower legitimacy perceptions of women leaders in those industries. The converse applies in typically feminine or gender-neutral industries (Williams & Tiedens, 2015).

Fortunately, there is a trend towards the feminisation of management and an appreciation of the soft power bases, as business recognises the value of transformational leadership (Rudman & Glick, 1999; Rosette & Tost, 2010). The stereotypically feminine quality of communion, described as an inclusive and participatory approach (Rudman & Glick, 1999), is prevalent in the transformational leadership style. The inclusion of communion approaches such as individualised consideration and inspirational motivation (Rosette & Tost, 2010), are desirable traits which attenuate power differentials based on prescriptive stereotyping, thereby boosting perceptions of positional power.

2.3 Personal / soft power

Those in positions of organisational authority must be able to exert influence in order to realise group objectives. Intrinsic bases of power are held to be more effective than formal bases, reducing the need for surveillance (Subasic et al., 2011), in that they foster cooperation and organisational commitment (Eyuboglu & Atac, 1991). Indeed, a leader's effectiveness may be dependent on his/her ability to draw on a range of power bases in addition to positional bases in order to exercise influence (Kudisch, Poteet, Dobbins, Rush & Russell, 1995).

The personal / soft bases of power are intrinsic and they are referent, informational and expert power – ''what you know'' and ''who you are'' (Zhao et al., 2016), as well as personal reward power and legitimacy of dependence power. These constructs are all perceptual at the subordinate level i.e. the power exists only to the extent that the follower grants it (Kudisch et al., 1995).

Referent power refers to the influence that a leader derives from a follower's admiration, respect or desire to gain approval, dependent on the individual's social attractiveness to others (Kudisch et al., 1995; Carli, 1999). This power base is symbolic and a strong source of power for charismatic leaders, where followers are induced to act unwittingly based on a feeling of identification with the leader (Sturm & Antonakis, 2015; Carli, 1999); Kudisch et al. (1995) demonstrated however that, although related, charisma is a separate and distinct construct from referent power in that it added significantly to the prediction of subordinates' attitudes beyond that of referent power. It is important to note however that referent power is often conflated with charisma (Rudman & Glick, 1999).

Expert power stems from expertise and knowledge, with the follower believing that the supervisor is superiorly skilled in a particular regard, i.e. power stemming from a leader's technical knowledge (Kudisch et al., 1995). Simply stated, expert power is based on perceived competence rather than on actual competence. It may be fair to suggest then that in environments where women hold lower status than men due to stereotypical bias, women would be attributed lower levels of expert power (Carli, 1999).

Informational power differs from expert power in that it refers more to the perception that a leader has access to valuable information (Zhao et al., 2016; Subasic et al., 2011), and that he/she can demonstrate the logical application of this information and

that the facts presented are unassailable (Eyuboglu & Atac, 1991). Another key discriminant between expert and informational power is a follower's acceptance of the facts independently of a relationship (Eyuboglu & Atac, 1991). In addition, while there is reportedly little difference in impact when expert and informational power bases are applied in instances of little importance for the target, the opposite is true for matters that are of greater significance for the target (Raven et al., 1998). One could hence reason that informational power is a more influential base than expert power.

It has been argued that, due to communality, women are more likely to use personal reward power, a soft base which includes tactics such as praise, while men are more likely to use impersonal reward power, a harsh base which includes tactics such as remunerative increase or promotion (Raven et al., 1998). Personal reward would likely intrinsically motivate subordinates more so than impersonal rewards, resulting in greater longevity of the desired outcome (Carli, 1999; Kasulis and Spekman, 1980).

Although closely related to positional power, the legitimate power of dependence implies a social responsibility norm, where followers internalise the leader's positional power, for example in understanding why a leader would require assistance; whereas for positional power, the follower only accepts that assistance is required (Raven et. al.; 1998). Important implications of internalisation include the likelihood that desired behaviours would continue in the absence of surveillance (Raven et al., 1998; Subasic et al, 2011), again implying the superiority of soft power bases over harsh ones.

2.8 Relational power and followership

Relational power is distinct from formal power and personal power in that it relies on the relationship between a leader and a follower – ''who you know''. Additionally, although it is developed between two actors, the power can be extended to other individuals by virtue of transivity (Zhao et al., 2016). Interpersonal relationships, particularly in the context of managing alliances, are antecedents to power – individuals who struggle to maintain relationships will struggle to retain power (Sturm & Antonakis, 2015).

In leadership theory, power and influence have largely been studied from a leader-centred perspective, while followers have been relegated to the role of passive recipients (Oc & Bashshur, 2013). Influence is a capacity afforded by followers. Followers form part of the social context of leaders, and have an active influence over leader behaviour (Oc & Bashshur, 2013). Indeed, influence is multi-directional and the

role of followers cannot be ignored in understanding leader power and influence. Leadership theories of followership therefore focus on followers' processes of attribution and sense-making in understanding organisational leadership (Schyns & Bligh, 2007).

While followers typically hold less position power than leaders, they are able to exert power upwards by means of feedback – such upward feedback makes the incongruity between a leader's perception of self, and the perception by others, salient; as a result there is the possibility that a leader may, in response, adjust his/her behaviour (Oc & Bashshur, 2013).

Powerful people are only effective to the extent that followers perceive their authority as being legitimate (Vescio, Snyder & Butz, 2003), and so Schyns & Bligh (2007) argue that because the effectiveness of a leader is constructed in the mind of a follower, leadership outcomes should be operationalised as the perceptions of followers.

2.9 Authentic leadership and self-awareness

Authentic leadership creates conditions where collective learning can be jointly conceived (Fletcher, 2004). The success of this sort of leadership attempt is dependent on a leader's ability to cultivate a socially interactive organisational climate – skills such as self-awareness, balanced processing and relational transparency act as enablers in this regard (Fletcher, 2004).

Walumbwa et al. (2008) validate that authentic leadership is multi-dimensional, composing of self-awareness, balanced processing, relational transparency and internalised moral perspective. This refinement of authentic leadership theory is acknowledged as being the most generally accepted definition within extant literature (Banks, McCauley, Gardner & Guler, 2016).

Avolio and Gardner (2005) noted that the underlying leadership process described by authentic leadership theory stresses the importance of self-awareness. Leaders who are self-aware demonstrate an understanding of their personal strengths, weaknesses, a consciousness of one's impact on other people (Walumbwa et al., 2008), and an understanding of one's emotions and personality (Ilies et al., 2005). Indeed, emotional intelligence is inked to the essential elements of effective leadership (Ilies et al., 2005), and a fundamental principle of authentic leadership is that alignment between a leader's values and actions results in heightened levels of leader psychological well-

being (Banks et al., 2016); in fact, authentic behaviour results in eudemonic well-being of the leader (Ilies et al., 20015). A lack of self-awareness will tend to result in the leader espousing values based on social pressures, which values may not be true to the self (Leroy, Palanski & Simons, 2012), and which may lead to the negative illegitimacy outcomes as described by Vial et al. (2016).

Theory on authentic leadership proposes that authentic leaders are particularly interested in empowering their followers to make a difference (Walumbwa et al. 2008). Authentic leadership has been shown to drive follower commitment and performance through trust in, and engagement and identification with the leader (Leroy et al. 2012; Banks et al., 2016).

Walumba et al (2008) further suggest that when leaders are aware of, and espouse their true values, beliefs and strengths, while helping followers do the same, follower well-being and performance also improve as a result. They also posit that authentic leaders are prepared to present themselves as vulnerable, which engenders trust and positively influences the leader-follower social identity; however, Vial et al (2016), in developing a cycle of illegitimacy model, have posited gender as a moderator in a leader's ability to espouse one's true values, beliefs and strengths.

Authentic leadership serves as a ''root construct'' of transformational leadership (Avolio & Gardner, 2005). Banks et al. (2016) demonstrated a strong correlation between transformational leadership and authentic leadership, with a considerable amount of conceptual overlap. Interestingly, Pierro et al. (2013) demonstrated that a transformational leadership style led to a heightened willingness for employees to comply with soft / personal power bases.

2.10 Relational authenticity

Authentic people are internally motivated, deeply in tune with who they are, and they help others to be their authentic selves (Liu, Cutcher & Grant, 2015). There is a growing body of literature which argues however that authenticity is a performance, rather than an existential trait; that being perceived as authentic is largely due to performing authenticity in line with a given social context (Liu et al., 2015).

Identity operates on three levels, being individual level, relational level and collective level (Lord and Hall, 2005). The individual level identifies intrinsic uniqueness of the self, whereas the relational level contrasts its identity against the context of others. The collective identity, as the name suggests, is anchored in the values and qualities of

a collective, such as an organisation, and who they are as members of this distinct collective (Steffens et al., 2016). In the shift from individual to collective level, each level therefore comprises differentiated self-regulation and leadership requirements (Lord and Hall, 2005). Simply put, ones sense of self is flexible and can be defined at different levels depending on the prevailing social context (Steffens, Mols, Haslam & Okimoto, 2016).

Authentic leaders perceive the environment in which they lead and self-monitor, being sensitive to the balance between expressing their true self and the implications that may result (Ilies et al., 2005). Far from being inauthentic, expert leaders are those who are able to integrate contextual differences with their deeply held values in order to employ this leadership style that is authentically sensitive to followers; indeed, a true understanding of a leader's values in relation to contextual identities is the mark of a sophisticated leader (Lord & Hall, 2005).

Similarly, leadership skill and knowledge is not a static trait; it is usually a process of accessing and selecting the appropriate cognitive tool in response to what is required in the moment of task execution; however, how this information is organised and accessed is closely related to a leader's self-identity (Lord & Hall, 2005).

Relational concepts of leadership focus on influence as interactive, existing by virtue of a set of shared practices, enacted by individuals across levels. Relational power is defined as a type of power that is borne of personal connections with others (Zhao et al., 2016); it recognises the relationship between personal and positional leadership, where positional leaders are sustained only by the greater collaborative subtext of a collective interdependence (Fletcher, 2004). Authentic leadership is attributional, and leaders therefore need to ''do'' authenticity (Liu et al.; 2015); leaders who share a social identity with followers need to act in a way that reflects the values and beliefs of the collective if they seek to maintain power and influence (Subasic et al., 2011). Relational authenticity functions within the doctrine of social identity theory; when value congruence between leaders and followers is high, and leader behaviour is authentic, follower belongingness to the organisation is enhanced, making it more likely that a leader is able to influence behaviour (Ilies et al., 2005).

Leadership is viewed as a social process, engaging collaboration, shifting from a concept of ''self'' to one of ''self-in-relation'' to a socially constructed context – however this shift is intrinsically tied to systemic and distinct gender and power dynamics (Fletcher, 2004; Liu et al.; 2015). Collaboration and nurturing the growth of people are skills that are intuitively aligned with femininity (Fletcher, 2004), whereas heroic

individualism persists as the archetype of male leadership (Liu et al., 2015). This gender dynamic adds a layer of complexity, and is coupled with a power dynamic – the contrast between ‘’power over’’ and ‘’power with’’. Stereotypical masculinity associates power with a hierarchical notion of control and individual action (Fletcher, 2004). These gender and power associations exert significant influence on follower expectations of how a leader should act. It is arguable then that theories of leadership as a social process must acknowledge the gender effect (Fletcher, 2004), and that authentic leadership is therefore not gender neutral; authenticity needs to be performed in line with gender norms for a leader to be constructed as authentic (Liu et al., 2015).

A psychological relationship exists between leaders and followers which plays a fundamental role in the attainment of influence (Subasic et al., 2011). When there is a shared social identity between leaders and followers, a leader may lose influence when exercising power from bases that were not bestowed on the leader by followership (Oc & Bashshur, 2013; Subasic et al., 2011). Eagly (2005) proposes that greater attention be given to the aspects of authenticity that reside between a leader and his/her followers, i.e. how a follower understands and relates to a leader’s expression of values, relational transparency and self-awareness. Indeed, since follower identification with a leader yields a significant influence process (Ilies et al., 2005), firms need to understand how to grow and develop effective cognitive positive social leader-follower exchanges. Ilies et al. (2005) demonstrated that authentic leaders are more likely to have positive social exchanges with their followers, and so perhaps the greater challenge for firms is to understand the gender related nuances in developing relationally authentic leaders.

The benefits of authentic leadership on organisational performance are well documented (Ilies et al., 2005; Leroy et al. 2012; Banks et al., 2016), but despite the wealth of literature on the topic, the perception of authenticity from a follower perspective is under studied. This is an important gap because ultimately it is a follower’s internalisation of his/her perception of the leader’s authenticity, and his/her resultant actions that account for the impact that a leader has in the organisation (Steffens et al., 2016). The data for this study are therefore harvested from a follower perspective.

Social identity theory postulates that if a leader is perceived to prioritise the interests of the collective over his/her self-interest, then he/she is likely to enhance their charisma through the perceived socialised action (Steffens et al., 2016). Following from the discussion on the conflation of charisma and referent power (Rudman & Glick, 1999;

Kudisch et al., 1995; Carli, 1999; Sturm & Antonakis, 2015) it could be argued then that if a leader is perceived as being self-aware in the collective context, this may have a positive impact on his/her perceived referent power.

2.11 Women's leadership challenges

Society has a hard and fast categorisation of individuals into either male or female (Liu et al., 2015), and a gender gap results, i.e. a state of power or status inequality where typically men are rendered higher in status by virtue of their gender (Carli, 1999; Mendelberg & Karpowitz, 2016).

There are however important distinctions - social and psychological factors - at the intersection of gender and power (Fletcher, 2004; Subasic et al., 2011) and Mendelberg & Karpowitz (2016) categorised the gender gap in terms of three perspectives: the first arising from differences in incentives and economic interests; the second deriving from differences in patterns of interpersonal communication and conflict management/aversion; and the third focuses on differences in tendencies toward assertive behaviour and the social norm that 'women should not lead men' (Mendelberg & Karpowitz, 2016). However, the gender gap is highly responsive to the context of the environment, and is therefore inconsistent. These authors then demonstrated that a women's status substantially affected their level of assertive participation and resultant perceived influence.

In spite of an increasing perception that communal characteristics are beneficial antecedents in the development of effective leadership, high status leadership roles such as high political office or chief executive, are still largely stereotyped as agentic in their trait requirements (Rosette & Tost, 2010); when executive leadership is conflated with the charismatic aspects of transformational leadership, (i.e. those that reflect ambition and assertiveness such as inspirational motivation and idealised influence), the traditional gender norms which favour modesty in women and the prescription that women must balance agency and communion, may be what is proliferating the exclusion of women from these roles (Rudman & Glick, 1999; Vinkenburg, van Engen, Eagly and Johannesen-Schmidt, 2011).

Glass and Cook (2016) found that women were more likely than men to be appointed as CEO in a struggling firm; a result which recent theoretical advances have described as the glass cliff phenomenon. These appointments are high-risk and contribute to increased performance scrutiny.

On the one hand, Jordan et al. (2011) found that a leader's risk appetite was in part attributable to stress as a function of powerlessness and instability, where the stable powerless favoured probabilistic over certain outcomes. This may explain why women accept risky appointments, in that risk-taking can have significant consequences for one's subsequent degree of power (Jordan et al., 2011).

Another theory suggests that this phenomenon is as a result of women possessing certain qualities that are valued during times of crisis; communal qualities such as morale-building capabilities, behaviours such as democratic orientation and the collaborative leadership style displayed by transformational leaders (Glass & Cook, 2016; Liu et al., 2015). Importantly, they found that many of the women sampled had exercised great agency in seeking out such appointments, as a strategy for establishing credibility as competent and effective leaders. This strategy may attribute its success to the double standards of competence phenomenon, i.e. the process by which bias can affect the assessment of ability that is inferred from performance (Rosette & Tost, 2010); that is, successful women leaders are perceived to possess exceptional capability in that they have achieved success in spite of the perceived challenges presented by gender stereotype. Rosette & Tost (2010) further found that double standards operate for women at various organisational levels, but that the effect is heightened at the top level. Indeed, Vinkenburg et al. (2011) too found that for women to navigate a route to senior management, they were expected to blend communal and agentic leadership traits, whereas male leaders only need to demonstrate agentic strength.

Glass and Cook (2016) identified certain challenges that these women experience post appointment, such as a lack of support, and indirect and overt resistance from subordinates and colleagues, leading to a reduced capacity to exert authority. Other challenges include exclusion from professional networks and other networking events, and a lack of acknowledgement regarding their role and responsibilities (Glass & Cook, 2016). Followers are more inclined to support a leader to the extent that the leader is perceived to be true to the collective self by championing the collective interests of the group that he/she is leading (Steffens et al., 2016) – the fact that agentic women are perceived as out-group members may be what is propagating these challenges.

This glass cliff phenomenon makes women more vulnerable to scrutiny and performance pressure, resulting in women having to expend cognitive resources on impression management such as temperance of tone and body language; in other words finding means of presenting themselves as highly communal as well as agentic (Rudman & Glick, 1999). This is a theme common with Williams & Tiedens' (2015)

recommendation that women exert dominance implicitly, i.e. employ soft power more so than harsh power. Importantly Glass & Cook (2016) found that this ultimately leads to exhaustion and dissatisfaction; gender bias therefore shapes women's career entry as well as their self-selection out of leadership positions, as women grow increasingly unwilling to have to continue to confront bias and prove their abilities later in life. This disadvantages companies who ultimately lose valuable leadership capital (Glass & Cook, 2016).

In order to successfully further leadership skill development, task success as well as social acceptance are important antecedents to self-confidence and self-view as a leader (Lord and Hall, 2005). Indeed, with increasing experience, leadership becomes a more core aspect of one's self-identity (Lord and Hall, 2005). Followers recognise leadership in others when displayed traits match their internalised perceptions of leadership theories – again this demonstrates that followers are able to influence leadership development (Hollander, 1992; Lord & Hall, 2005).

Finally, emotional intelligence, i.e. the aptitude for perceiving and responding to the emotions of others, is emerging as a predictor of leadership success, and also an area where women may be more competent than men as a result of prescriptive gender stereotyping (Lord and Hall, 2005). Perhaps a solution lies in capitalising on this emotional intelligence in order to understand how to be relationally authentic, starting with relational self-awareness.

2.12 Conclusion

Power plays an omnipresent role in a leader's ability to influence individuals within an organisation (Sturn & Antonakis, 2015). The eleven bases of interpersonal power are grouped into two dimensions, being soft and harsh power (Raven et al, 1998; Raven, 2008; Pierro et al., 2013). Social power is not unilateral, and understanding leadership from a follower perspective creates a foundation for discovering how leaders may gain access to power. It introduces the lens of relational power, in that the follower may not ascribe power to a leader if he/she is seen to be violating the relational authenticity that derives from their shared social identity (Subasic et al, 2011; Jordan et al., 2011; Aiello et al., 2013). Leaders must be mindful of this psychological dynamic when deciding which power base to draw on.

Power is largely attributed by follower to leader as a consequence of the degree of status that has been conferred, which status is largely dependent on stereotypical role

prescriptions (Magee & Galinsky, 2008; Williams & Tiedens, 2015). This leads to gender related bias for power attributions in that women are held to a higher standard of 'niceness' and are penalised when exercising agency (Rudman & Glick, 1999; Chizema et al., 2016). Additionally, status is a precursor to the legitimacy of power-holders, where increasing status enhances the formal/harsh power perceptions (Vial et al., 2016). Subordinates are therefore likely to attribute status disproportionately in favour of men, making it more likely that women will be cast as illegitimate (Vial et al., 2016), and that the cycle of illegitimacy is self-reinforcing in that at low levels of legitimacy, leaders tend to leverage their formal power in a more coercive way, but that this could negatively impact leader performance and behaviour towards subordinates, resulting in further illegitimacy perceptions. This also comes at the risk of violating one's personal value system (Raven, 2008).

Williams & Tiedens' (2015) counter-proposal that women rather communicate dominance implicitly is an allusion to the use of soft power. Soft power approaches are becoming increasingly desirable as business begins to recognise the value of transformational leadership styles, which value certain communal approaches as advantageous traits, thereby attenuating power differentials based on prescriptive stereotyping and boosting perceptions of women's positional power (Rosette & Tost, 2010; Rudman & Glick, 1999). In addition, the softer bases of power reduce the need for surveillance in that they foster cooperation and organisational commitment, rendering them more effective than the harsh bases (Eyuboglu & Atac, 1991; Kudisch et al., 1995; Rush & Russell, 1995; Subasic et al, 2011).

On the other hand, prescriptive gender stereotypes constrain men from performing relational and communal displays of leadership (Liu et al., 2015). Perhaps then, men who demonstrate higher levels of self-awareness can actually increase perceptions of the more personal bases of power and thereby too increase influence.

A brief recap on the soft bases of power follows: referent power is a strong source of power for charismatic leaders, and charisma is often conflated with leadership at an executive level. Expert power is closely related to informational power but with key distinctions, such as follower perceived credence, as well as the differences in the impact of the power bases on matters of varying significance (Eyubogly & Atac, 1991; Raven et al., 1998; Subasic et al., 2011); this leads to the postulation that informational power is a more influential base than expert power, and that referent power is relationship driven, suggesting that due to communalism, women leaders may possess naturally higher attributions than men (Carli, 1999).

Walumba et al. (2008) advanced that individuals with increased self-awareness are to a lesser extent inhibited by stereotypical biases, and therefore demonstrate more success in forming genuine relationships with others. Additionally, as Sturm and Antonakis (2015) have suggested, interpersonal relationships are antecedents to power. It is reasonable to suggest then that an increase in self-awareness may increase a leader's likeability and therefore positively impact perceptions of referent power.

Certainly, at the core of self-awareness is that a leader's values and actions become synonymous with how the leader perceives the self. Self-aware leaders engender trust which positively influences the leader-follower social identity (Walumbwa et al., 2008). Leaders who are self-aware are emotionally intelligent, understanding their personal strengths and weaknesses as well as their impact on other people; however it is exactly this shared social identity which makes for being perceived as authentic dependent on performing authenticity in line with what has been cognitively contracted for the collective (Liu et al, 2015). Perhaps, in their development, leaders should experiment by switching from ''performance mode'' to ''learning mode'' in order to get more comfortable with the concept of relational authenticity. Self-awareness should also come with the realisation that we are constantly evolving, as ''who we are'' changes over time and between context based on experience and learnings.

In sum, relational self-awareness, followership, and interpersonal-power all calibrate within the doctrine of social identity theory in that when value congruence is high and authentic, follower belongingness to the collective is enhanced, making it more likely that a leader will be able to exert influence (Ilies et al., 2005); however, it is important to understand the factors that shape followers' perceptions of self-awareness, since a follower's perception of self-awareness is not necessarily constructed in accordance with an individual's actual sense of self. Accordingly, since the effectiveness of a leader as well as the authenticity of a leader in a given context are both constructed in the mind of a follower, the data for this study, which measure leader self-awareness and power attributions, were therefore garnered from the perceptions of followers.

Finally, social identity and the power dynamics within have systemic gender differences, requiring the acknowledgment of the gender effect on follower expectations of how a leader should act. Gender matters in environments where representation and structure indicate that a women's status is muted, and its effects dissolve when their status and authority augment (Mendelberg & Karpowitz, 2016). Leaders who are perceived to be self-aware will increase their power attributions, particularly of the soft bases, but the impact cannot be the same for men as for women,

as being perceived self-aware as a man cannot mean the same as being perceived self-aware as a woman. The study thus aims to show a means for individuals to gain power and influence through increased self-awareness, and how this differs by gender.

CHAPTER 3: Research hypotheses

3.1 Introduction

Self-awareness is an important domain of authentic leadership, and this study aimed to show that perceptions of a leader's self-awareness were related to and positively influenced the attributions of social power. Social power is a second order construct measured by a scale comprising various sub-constructs and this was demonstrated with a confirmatory factor analysis.

Importantly, the research aimed to understand which aspects of social power were most impacted by self-awareness. A principal component analysis confirmed that the 11 bases of power could be grouped along the two dimensions of harsh and soft power, and this research theorised that perceived self-awareness would have a more significant impact on the soft bases than on the harsh bases.

The further conjecture was that gender would emerge as a significant moderator of the relationship, in other words that perceptions of a leader's self-awareness would positively impact follower attributions of the leader's power, but that the significance and degree of correlation would diverge across bases for males compared to females.

3.2 Research hypotheses

3.2.1 Hypothesis 1

H_1: There is a significant positive relationship between perceptions of a leader's self-awareness and the bases of their power overall.

3.2.2 Hypothesis 2

H_2: There is a significant positive relationship between perceptions of a leader's self-awareness and the bases of their soft power.

3.2.3 Hypothesis 3

H_3: There is a significant positive relationship between perceptions of a leader's self-awareness and the bases of their harsh power.

3.2.4 Hypothesis 4

H_4: The influence of perceptions of a leader's self-awareness on the bases of their social power is far greater in the context of soft power than harsh power.

3.2.5 Hypothesis 5

H_5: Gender moderates the influence of perceptions of a leader's self-awareness on their bases of soft power.

CHAPTER 4: Research method and methodology

4.1 Research design

Edmondson and McManus (2007) described methodological fit as ''internal consistency among elements of a research project'' (p.1155). They proposed that management theory falls along a continuum, from nascent to mature, dependent on the degree of concurrence and acceptance among academics, and that this state of prior theory is a strong determinant of research design appropriateness.

Social power theory and authentic leadership theory are both mature topics of interest, supported by extensive research in varied settings; this study was therefore able to leverage off of the wealth of extant literature in identifying critical variables, allowing the current research to explore issues of refinement such as relationships between individualised factors of differing constructs (Podsakoff, Mackenzie, Lee & Podsakoff, 2003), or the identification of potential moderators (Edmondson et al., 2007). This was achieved by means of a quantitative research approach.

The study followed a hypotheses testing approach which examines the relationships between previously developed constructs (Edmondson et. al., 2007). The construct of social power, and self-awareness as a sub-construct of authentic leadership, were measured by means of pre-existing instruments administered by an electronic questionnaire employing a Likert scale. The situation or conditions under which the instruments were administered were not manipulated to examine how people react, and the research is thus classified as non-experimental (Saunders & Lewis, 2012).

A linear regression analysis of correlation was performed using the SPSS statistical software. The statistical results were then used to test the hypotheses that examined whether there was a significant correlation between leader self-awareness and the eleven bases of power as defined by the IPI, and whether the results were indeed moderated by gender.

4.2 Population

Saunders and Lewis (2012) defined a population as ''the complete set of group members'' (p. 132). The population for this study comprised employees within the logistics industry in South Africa.

The logistics industry is typically male-dominated; according to Yee et al. (2016), only 13% of C-Suite employees in the logistics industry are women – this is the lowest percentage across all industries surveyed. This industry was therefore selected as it would potentially emphasise the perceived misfit between what is expected of leaders and what is expected of women, resulting in higher power differentials and consequently lower legitimacy perceptions of women leaders in this industry.

4.3 Sample size and method

Access to the entire population was not available and therefore a non-probability sampling method was used to collect data; the sample was limited to four companies within the logistics industry in South Africa, being Super Group Ltd, GAC Laser International Logistics (Pty) Ltd, Laser Logistics (Pty) Ltd and Barloworld Transport (Pty) Ltd. This was a homogenous purposive sampling technique intended to mitigate industry as a potential moderator.

A link to the electronic survey was delivered to the key persons within the four companies, for distribution to their employees. The total number of recipients is unknown. 501 responses were received, of which 116 were incomplete; the final sample size therefore consisted of 385 sets of data.

4.4 Units of analyses

There were two units of analyses: a) employee perceptions of their leader's self-awareness; and b) employee attributions of the nature of their leader's power.

4.5 Measurement

4.5.1 Interpersonal power inventory

Raven, Schwarzwald & Koslowsky (1998) developed the Interpersonal Power Inventory (''IPI"), which is an instrument used to measure 11 bases of power, including reward (personal, impersonal), coercion (personal, impersonal), legitimate (position, reciprocity, equity, dependence), expert, referent, and information. This instrument builds on the popular original five bases of power presented by French & Raven (1959)

and has particular utility for understanding the gender differences in interpersonal influence (Carli, 1999).

The IPI measures perceptions of power usage by a supervisor in an organisational setting. Importantly, it measures power choices from both the perspective of the influencing agent and the target. It employs a Likert-type scale with anchors ranging from 1 (definitely not comply) to 5 (definitely comply) (Elias & Cropanzano, 2006). This instrument was used to measure the dependent variables, being the follower perceptions of each of the eleven bases of power as constructed in the IPI. Followers were asked to recall a time when their supervisor had requested them to perform a task in a way in which they were reluctant to, and then explain their reason for compliance on the five point scale. The IPI comprised 33 questions in total. A sample from this instrument is attached as Appendix 1.

4.5.2 Authentic leadership questionnaire

Walumba et al (2008) developed and tested a theory-based instrument used to measure authentic leadership as a multi-dimensional construct; the Authentic Leadership Questionnaire (‘’ALQ’’) comprises leader self-awareness, relational transparency, internalised moral perspective, and balanced processing as interlinked dimensions. The ALQ employs a Likert-type scale with anchors ranging from 0 (not at all) to 4 (frequently, if not always). The ALQ is the most widely accepted measure of authentic leadership within extant literature (Banks et al., 2016). This instrument was used to measure the predictor variable, being leader self-awareness. The ALQ comprised 16 questions in total. A sample from this instrument is attached as Appendix 2.

The measurement of the predictor variable and independent variable from two separate instruments corresponds with the recommendation by Podsakoff et al., (2003) as a strategy for mitigating method bias.

These research instruments were administered to the potential respondents in the form of questionnaires, which Saunders and Lewis (2012) defined as ‘’methods of data collection in which each person is asked to answer the same set of questions in the same order” (pg. 141).

4.5.3 Reliability and validity

The ALQ and IPI instruments are both confirmatory models since they are deeply grounded in classical theory, and make explicit the constructs associated with the measures (Podsakoff et al., 2003). The Cronbach's alpha statistic measures the reliability of a scale. The measure ranges from 0 to 1, with higher levels of reliability represented at values closer to 1.

The authors of the ALQ estimated internal consistency alphas for each of the four dimensions of the scale; the self-awareness component of the ALQ yielded an alpha of 0.92 (Walumbwa et al., 2008); this indicated a high degree of reliability. A confirmatory factor analysis suggested that the scale was an appropriate second-order factor model, in that items loaded on to their respective factors, and that the four factors loaded on a second-order latent authentic leadership factor (Walumbwa et al., 2008).

The authors of the IPI estimated internal consistency alphas for each of the 11 bases of the scale; inter-correlations were calculated for each of the items conceptualised as belonging to each of the 11 bases, and the resulting individual alphas ranged from 0.67 to 0.86 – scores in excess of 0.65 are generally deemed to demonstrate reliability (Raven et al., 2008). A factor analysis of the mean scores was also performed, yielding a two-factor solution where 34.6% of the variance included the soft bases of power, and 24.7% of the variance included the harsh bases (Raven et al., 2008).

4.6 Piloting

In order to perform a pilot test, an electronic survey link was sent to ten individuals, of which six responded by completing the survey. No concerns were raised and therefore the survey was not amended further.

4.7 Data collection

According to Podsakoff et al. (2003), the medium used to gather data may be a source of common method variance; the surveys were thus administered as 'paper-and-pencil' questionnaires, rather than face-to-face interviews, since this medium has been shown to elicit more accuracy and less social response bias, which Podsakoff et al. (2003) define as ''the tendency on the part of individuals to present themselves in a favourable light, regardless of their true feelings about an issue or topic'' (pg. 881).

An electronic survey was designed on the Survey Monkey platform. A link to the survey was distributed to the HR departments of the companies specified, and they were requested to distribute the survey to all employees within the company domain.

In acknowledging the sensitive nature of topics addressed in the questionnaires, each questionnaire was preceded by a confidentiality assurance by the researcher, stating that only aggregated data would be disseminated in the dissertation.

In part A of the survey, participants were asked to rate their immediate supervisor by ranking the 16 items on the ALQ on a five point Likert scale. In part B, the participants were requested to complete the IPI.

The survey was only administered at one point in time, making the research cross-sectional in design (Saunders & Lewis, 2012). According to Edmondson and Mcmanus (2007), this method is appropriate since the constructs themselves are well understood, with reliable and valid measures of them in extant literature.

The survey deadline was set at four weeks post the distribution date. The recipients and response rates are detailed in the following table:

Table 2 – Organisational affiliation of the sample group

Name of company	Number of recipients	Number of incomplete responses	Number of complete responses
Super Group Ltd	2909	96	216
Barloworld Transport (Pty) Ltd	Unknown	6	26
GAC Laser International Logistics (Pty) Ltd	Unknown	5	90
Laser Logistics (Pty) Ltd	Unknown	9	53
Total	**Unknown**	**116**	**385**

4.8 Data analysis

Due to confidentiality constraints, data were analysed by the researcher, and not by a third party.

The raw data were extracted from Survey Monkey to Excel. The survey comprised 49 questions, and a completion rate of 91.8% was applied in determining a tolerance level for completeness of data sets – therefore only data sets with a minimum of 45 completed questions were included in the analysis. 116 data sets were deleted due to being incomplete. The eventual sample size for analysis was therefore 385 sets of data.

Prior to analysis, the data were edited in order to make the format suitable for analysis, and the following data were coded: employer, level of employment, supervisor gender, respondent gender, respondent race and respondent age category.

The relevant scores for the 16 ALQ questions were averaged to obtain a mean rating for each sub-construct, being self-awareness, balanced processing, relational transparency and moral/ethical orientation.

The mean scores for the 11 bases of power were factor analysed in order to determine whether underlying structures could be identified.

Kendall's correlation coefficient was used to analyse the data. This is a non-parametric statistical method that aims to quantify the relationship between variables, and measures the strength of the linear relationship (Wegner, 2012). A series of linear regression analyses were ran in order to assess the impact of perceived self-awareness on mean soft power, on mean harsh power, and on each of the 11 power bases. Correlations fell in a range of values between -1 for a perfect negative linear relationship, and +1 for a perfect positive linear relationship; the larger the coefficient approaching +1 or -1, the stronger the linear dependency between variables (Wegner, 2012).

4.9 Limitations of method

A specific drawback of the current dataset was that it was contained to a sample of companies within the logistics industry, which is widely held to be a male-dominated domain; this may have limited the generalisability of the results beyond the present analysis.

The sensitive nature of the responses sought from participants may have led to a social desirability response bias, or even attributional response bias, where follower perceptions of leader effectiveness may have influenced their ratings of self-awareness or power attribution (Kudisch et al., 1995). Additionally, the self-awareness and power that were measured were those perceived by the follower, i.e. they were subjective; the study may have yielded different results had leader self-perceptions been examined.

The nature of the questionnaire, i.e. where the subordinate was asked to respond to statements through recall, may have induced demand effects, i.e. where ''the subject's awareness of the implicit aspects of the psychological experiment may become the

principal determinant of [the subject's] behaviour, as they have received cues which communicate what is expected of [them] and what the experimenter hopes to find'' (Orne, 2009:112 as cited in Sturm & Antonakis, 2015). The given objective of the survey may have influenced the respondents' ratings.

CHAPTER 5: Results

5.1 Introduction

The quantitative study explored the correlation between perceptions of leader self-awareness and perceptions of leader social power, attempted to understand which dimensions were most impacted, and whether this was moderated by gender.

5.2 Reliability

Both instruments are confirmatory models since they are deeply grounded in classical theory, and make explicit the constructs associated with the measures (Podsakoff et al., 2003). The Cronbach's Alpha is an appropriate test for questionnaires using a Likert scale, and is most appropriately used when measuring different items within a single construct (Cronbach, 1951). The Cronbach's alpha statistic measures the reliability of a scale. Put simply, reliability is a measure of internal consistency, i.e. the extent to which a measure will yield consistent results under identical conditions (Cronbach, 1951). The measure ranges from 0 to 1, with higher levels of reliability represented at values closer to 1 i.e. the alpha will increase as inter-correlations among test items increases (Cronbach, 1951). A meta-analysis of Cronbach's Alpha, studied by Peterson (1994), found that it is a commonly accepted rule-of-thumb that a Cronbach's Alpha score of 0.65 and above indicates acceptable reliability, and that a score in excess of 0.8 indicates high reliability.

5.2.1 Cronbach's alpha – self-awareness

The relevant scores for the 16 ALQ questions were averaged to obtain mean ratings for each sub-construct, being self-awareness, balanced processing, relational transparency and moral/ethical orientation. Since self-awareness, as the predictor variable, was the area of focus, reliability was tested by means of determining the Cronbach's Alpha for the self-awareness sub-construct:

Table 3 - Reliability statistics for self-awareness

Power Base	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Self-awareness	0.901	0.901	4

Table 4 - Item-total statistics for self-awareness

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Self-awareness - Q13	11.084	9.041	0.783	0.623	0.871
Self-awareness - Q14	11.280	9.441	0.770	0.610	0.875
Self-awareness - Q15	11.086	9.443	0.795	0.646	0.866
Self-awareness - Q16	10.905	9.672	0.767	0.612	0.876

The resultant Cronbach's Alpha score for the sub-construct of self-awareness showed high construct validity at a score of .901 and the measure can therefore be regarded as reliable. The score was consistent with the alpha score obtained by the author of the ALQ, who documented a score of .92 for the self-awareness component of the ALQ in formulating the instrument (Walumbwa et al., 2008)

5.2.2 Cronbach's alpha – IPI

The relevant scores for the 33 IPI questions were averaged to obtain the mean scores for each of the 11 power bases.

Table 5 - Reliability statistics for the IPI bases of power

Power Base	Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
Referent	0.753	0.754	3
Informational	0.810	0.810	3
Expert	0.810	0.810	3
Legitimacy of dependence	0.661	0.668	3
Personal reward	0.810	0.810	3
Legitimacy of position	0.701	0.708	3
Impersonal reward	0.779	0.782	3
Legitimacy of equity	0.818	0.819	3
Impersonal coercion	0.842	0.842	3
Legitimacy of reciprocity	0.762	0.764	3
Personal coercion	0.737	0.735	3

The resultant scores for each of the sub-constructs making up the eleven bases of power were all in excess of 0.65, indicating that the measure was reliable. The lowest score was for the measure of legitimacy of dependence, at 0.661. Reliability for this sub-construct could have been increased marginally to 0.673 by removing question 11 from the dimension; however, this was not necessary since the Cronbach's Alpha exceeded 0.65.

Table 6 - Item-total statistics for IPI dimensions

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Coercion impersonal - Q9	4.760	6.476	0.649	0.435	0.836
Coercion impersonal - Q22	4.800	5.822	0.773	0.603	0.716
Coercion impersonal - Q29	4.660	6.167	0.703	0.530	0.784
Expert - Q3	6.820	5.321	0.612	0.381	0.786
Expert - Q13	6.990	4.323	0.712	0.510	0.683
Expert - Q28	6.800	4.830	0.659	0.450	0.739
Informational - Q4	7.590	4.116	0.640	0.410	0.759
Informational - Q17	7.690	3.642	0.682	0.465	0.716
Informational - Q31	7.620	3.908	0.657	0.434	0.741
Legitimacy of dependence - Q11	7.690	3.734	0.400	0.162	0.673
Legitimacy of dependence - Q18	6.920	3.833	0.530	0.302	0.492
Legitimacy of dependence - Q30	6.810	3.881	0.497	0.281	0.532
Legitimacy of equity - Q7	4.970	5.877	0.675	0.462	0.748
Legitimacy of equity - Q14	4.830	5.948	0.707	0.500	0.712
Legitimacy of equity - Q21	5.320	6.853	0.637	0.409	0.784
Legitimacy of reciprocity - Q8	4.940	5.492	0.581	0.341	0.695
Legitimacy of reciprocity - Q23	4.870	5.290	0.590	0.352	0.686
Legitimacy of reciprocity - Q32	5.430	5.869	0.613	0.376	0.664
Legitimacy of positon - Q2	7.300	4.231	0.418	0.177	0.744
Legitimcy of position - Q19	6.970	4.374	0.558	0.369	0.567
Legitimacy of position - Q25	7.140	3.887	0.593	0.395	0.511
Personal coercion - Q12	4.850	5.350	0.600	0.387	0.604
Personal coercion - Q16	5.540	6.407	0.470	0.222	0.751
Personal coercion - Q33	5.320	5.187	0.621	0.404	0.577
Personal reward - Q20	6.090	5.979	0.670	0.472	0.728
Personal reward - Q24	6.420	5.645	0.709	0.512	0.685
Personal reward - Q6	6.100	6.314	0.600	0.363	0.799
Referent - Q5	6.700	5.052	0.541	0.308	0.718
Referent - Q10	6.810	5.012	0.558	0.334	0.697
Referent - Q26	6.680	4.713	0.650	0.423	0.592
Reward impersonal - Q1	4.820	6.066	0.550	0.305	0.778
Reward impersonal - Q15	5.610	6.232	0.634	0.433	0.685
Reward impersonal - Q27	5.250	5.671	0.672	0.469	0.639

5.3 Validity

An instrument is valid if it is able to measure that which is desired to be measured (Wegner, 2012). The validity of the model was tested by calculating the inter-correlations among the three items that were constructed as belonging to each of the eleven bases of power. Table 6 illustrates the individual alphas that were obtained for each question, ranging from 0.32 to 0.71. Cohen (1992) defined the following effect sizes for recognising correlation coefficients in behavioural research as being practically significant:

- Small effect: $r = 0.10$
- Medium effect: $r = 0.30$
- Large effect: $r = 0.50$

Since all observed alphas were in excess of 0.30, the construct has been demonstrated to be valid.

Table 7 - Factor loadings for power base items

		Reward impersonal			Coercion impersonal			Legitimate position			Legitimate reciprocity			Legitimate equity			Personal coercion			Expert			Referent			Informational			Legitimate dependence			Personal reward		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Reward impersonal	1	1.00	0.46	0.52	0.28	0.25	0.35	0.46	0.16	0.26	0.37	0.43	0.35	0.39	0.41	0.35	0.36	0.31	0.38	0.26	0.20	0.26	0.29	0.27	0.28	0.24	0.17	0.17	0.27	0.19	0.21	0.42	0.40	0.43
	2	0.46	1.00	0.63	0.35	0.38	0.48	0.24	0.17	0.24	0.50	0.54	0.60	0.49	0.51	0.59	0.40	0.46	0.48	0.26	0.30	0.25	0.29	0.30	0.27	0.15	0.17	0.14	0.35	0.20	0.15	0.40	0.42	0.50
	3	0.52	0.63	1.00	0.30	0.42	0.50	0.28	0.25	0.32	0.48	0.59	0.54	0.49	0.55	0.54	0.46	0.38	0.51	0.34	0.30	0.35	0.36	0.32	0.41	0.16	0.19	0.22	0.36	0.24	0.23	0.47	0.53	0.54
Coercion impersonal	4	0.28	0.35	0.30	1.00	0.63	0.56	0.18	0.15	0.26	0.43	0.29	0.41	0.30	0.31	0.36	0.35	0.62	0.39	0.01	0.03	0.03	0.08	0.06	(0.02)	(0.08)	(0.10)	(0.01)	0.29	0.03	0.09	0.17	0.14	0.32
	5	0.25	0.38	0.42	0.63	1.00	0.71	0.11	0.15	0.24	0.39	0.40	0.45	0.34	0.40	0.47	0.39	0.60	0.45	0.04	0.06	0.13	0.09	0.08	0.06	(0.09)	(0.07)	0.07	0.30	0.10	0.15	0.21	0.23	0.37
	6	0.35	0.48	0.50	0.56	0.71	1.00	0.18	0.16	0.30	0.39	0.38	0.54	0.37	0.41	0.46	0.38	0.56	0.56	0.05	0.06	0.14	0.09	0.09	0.08	(0.10)	(0.03)	0.11	0.31	0.08	0.15	0.27	0.25	0.42
Legitimate position	7	0.46	0.24	0.28	0.18	0.11	0.18	1.00	0.35	0.39	0.27	0.26	0.16	0.35	0.30	0.25	0.20	0.21	0.28	0.43	0.33	0.28	0.42	0.24	0.29	0.36	0.24	0.22	0.24	0.24	0.22	0.34	0.28	0.32
	8	0.16	0.17	0.25	0.15	0.15	0.16	0.35	1.00	0.59	0.23	0.23	0.20	0.28	0.25	0.19	0.23	0.17	0.18	0.37	0.39	0.41	0.29	0.24	0.40	0.35	0.35	0.39	0.27	0.50	0.39	0.28	0.34	0.30
	9	0.26	0.24	0.32	0.26	0.24	0.30	0.39	0.59	1.00	0.30	0.38	0.27	0.33	0.31	0.27	0.31	0.28	0.39	0.26	0.30	0.34	0.35	0.22	0.42	0.25	0.24	0.35	0.26	0.36	0.41	0.34	0.34	0.47
Legitimate reciprocity	10	0.37	0.50	0.48	0.43	0.39	0.39	0.27	0.23	0.30	1.00	0.50	0.53	0.68	0.57	0.59	0.51	0.44	0.53	0.24	0.22	0.17	0.40	0.33	0.30	0.12	0.13	0.19	0.36	0.14	0.20	0.49	0.44	0.49
	11	0.43	0.54	0.59	0.29	0.40	0.38	0.26	0.23	0.38	0.50	1.00	0.54	0.47	0.53	0.57	0.44	0.40	0.47	0.29	0.26	0.23	0.33	0.34	0.41	0.19	0.21	0.29	0.31	0.25	0.29	0.49	0.60	0.67
	12	0.35	0.60	0.54	0.41	0.45	0.54	0.16	0.20	0.27	0.53	0.54	1.00	0.50	0.52	0.56	0.47	0.47	0.57	0.22	0.22	0.17	0.26	0.24	0.29	0.09	0.10	0.18	0.33	0.16	0.15	0.43	0.42	0.51
Legitimate equity	13	0.39	0.49	0.49	0.30	0.34	0.37	0.35	0.28	0.33	0.68	0.47	0.50	1.00	0.65	0.56	0.46	0.37	0.50	0.32	0.31	0.23	0.42	0.36	0.36	0.24	0.17	0.24	0.36	0.16	0.24	0.54	0.38	0.50
	14	0.41	0.51	0.55	0.31	0.40	0.41	0.30	0.25	0.31	0.57	0.53	0.52	0.65	1.00	0.60	0.50	0.47	0.47	0.33	0.36	0.31	0.37	0.35	0.36	0.24	0.22	0.20	0.32	0.21	0.20	0.53	0.52	0.54
	15	0.35	0.59	0.54	0.36	0.47	0.46	0.25	0.19	0.27	0.59	0.57	0.56	0.56	0.60	1.00	0.40	0.45	0.49	0.21	0.26	0.22	0.32	0.29	0.32	0.12	0.16	0.17	0.38	0.21	0.20	0.37	0.44	0.57
Personal coercion	16	0.36	0.40	0.46	0.35	0.39	0.38	0.20	0.23	0.31	0.51	0.44	0.47	0.46	0.50	0.40	1.00	0.40	0.60	0.25	0.27	0.23	0.38	0.34	0.37	0.13	0.15	0.26	0.36	0.28	0.23	0.52	0.45	0.54
	17	0.31	0.46	0.38	0.62	0.60	0.56	0.21	0.17	0.28	0.44	0.40	0.47	0.37	0.47	0.45	0.40	1.00	0.43	0.09	0.07	0.05	0.21	0.05	0.10	(0.05)	(0.04)	0.00	0.30	0.12	0.13	0.24	0.28	0.41
	18	0.38	0.48	0.51	0.39	0.45	0.56	0.28	0.18	0.39	0.53	0.47	0.57	0.50	0.47	0.49	0.60	0.43	1.00	0.21	0.17	0.18	0.32	0.32	0.33	0.12	0.12	0.22	0.28	0.16	0.19	0.49	0.41	0.57
Expert	19	0.26	0.26	0.34	0.01	0.04	0.05	0.43	0.37	0.26	0.24	0.29	0.22	0.32	0.33	0.21	0.25	0.09	0.21	1.00	0.59	0.52	0.47	0.31	0.49	0.49	0.38	0.36	0.20	0.35	0.24	0.45	0.37	0.31
	20	0.20	0.30	0.30	0.03	0.06	0.06	0.33	0.39	0.30	0.22	0.26	0.22	0.31	0.36	0.26	0.27	0.07	0.17	0.59	1.00	0.65	0.40	0.36	0.55	0.41	0.49	0.41	0.23	0.32	0.33	0.43	0.35	0.35
	21	0.26	0.25	0.35	0.03	0.13	0.14	0.28	0.41	0.34	0.17	0.23	0.17	0.23	0.31	0.22	0.23	0.05	0.18	0.52	0.65	1.00	0.33	0.33	0.51	0.41	0.55	0.51	0.22	0.40	0.36	0.37	0.35	0.32
Referent	22	0.29	0.29	0.36	0.08	0.09	0.09	0.42	0.29	0.35	0.40	0.33	0.26	0.42	0.37	0.32	0.38	0.21	0.32	0.47	0.40	0.33	1.00	0.42	0.53	0.33	0.25	0.23	0.19	0.26	0.24	0.61	0.38	0.38
	23	0.27	0.30	0.32	0.06	0.08	0.09	0.24	0.24	0.22	0.33	0.34	0.24	0.36	0.35	0.29	0.34	0.05	0.32	0.31	0.36	0.33	0.42	1.00	0.56	0.41	0.37	0.32	0.28	0.22	0.27	0.53	0.46	0.37
	24	0.28	0.27	0.41	(0.02)	0.06	0.08	0.29	0.40	0.42	0.30	0.41	0.29	0.36	0.36	0.32	0.37	0.10	0.33	0.49	0.55	0.51	0.53	0.56	1.00	0.43	0.45	0.49	0.23	0.35	0.38	0.51	0.55	0.48
	25	0.24	0.15	0.16	(0.08)	(0.09)	(0.10)	0.36	0.35	0.25	0.12	0.19	0.09	0.24	0.24	0.12	0.13	(0.05)	0.12	0.49	0.41	0.41	0.33	0.41	0.43	1.00	0.59	0.54	0.19	0.41	0.31	0.34	0.32	0.21
Informational	26	0.17	0.17	0.19	(0.10)	(0.07)	(0.03)	0.24	0.35	0.24	0.13	0.21	0.10	0.17	0.22	0.16	0.15	(0.04)	0.12	0.38	0.49	0.55	0.25	0.37	0.45	0.59	1.00	0.59	0.18	0.50	0.39	0.32	0.37	0.26
	27	0.17	0.14	0.22	(0.01)	0.07	0.11	0.22	0.39	0.35	0.19	0.29	0.18	0.24	0.20	0.17	0.26	0.00	0.22	0.36	0.41	0.51	0.23	0.32	0.49	0.54	0.59	1.00	0.25	0.52	0.62	0.34	0.33	0.35
Legitimate dependence	28	0.27	0.35	0.36	0.29	0.30	0.31	0.24	0.27	0.26	0.36	0.31	0.33	0.36	0.32	0.38	0.36	0.30	0.28	0.20	0.23	0.22	0.19	0.28	0.23	0.19	0.18	0.25	1.00	0.35	0.32	0.23	0.27	0.26
	29	0.19	0.20	0.24	0.03	0.10	0.08	0.24	0.50	0.36	0.14	0.25	0.16	0.16	0.21	0.21	0.28	0.12	0.16	0.35	0.32	0.40	0.26	0.22	0.35	0.41	0.50	0.52	0.35	1.00	0.50	0.27	0.39	0.32
	30	0.21	0.15	0.23	0.09	0.15	0.15	0.22	0.39	0.41	0.20	0.29	0.15	0.24	0.20	0.20	0.23	0.13	0.19	0.24	0.33	0.36	0.24	0.27	0.38	0.31	0.39	0.62	0.32	0.50	1.00	0.26	0.37	0.34
Personal reward	31	0.42	0.40	0.47	0.17	0.21	0.27	0.34	0.28	0.34	0.49	0.49	0.43	0.54	0.53	0.37	0.52	0.24	0.49	0.45	0.43	0.37	0.61	0.53	0.51	0.34	0.32	0.34	0.23	0.27	0.26	1.00	0.52	0.57
	32	0.40	0.42	0.53	0.14	0.23	0.25	0.28	0.34	0.34	0.44	0.60	0.42	0.38	0.52	0.44	0.45	0.28	0.41	0.37	0.35	0.35	0.38	0.46	0.55	0.32	0.37	0.33	0.27	0.39	0.37	0.52	1.00	0.66
	33	0.43	0.50	0.54	0.32	0.37	0.42	0.32	0.30	0.47	0.49	0.67	0.51	0.50	0.54	0.57	0.54	0.41	0.57	0.31	0.35	0.32	0.38	0.37	0.48	0.21	0.26	0.35	0.26	0.32	0.34	0.57	0.66	1.00

The perceptual measures were then factor analysed with a principal component analysis (''PCA'') in order to determine whether the underlying dimensions of harsh and soft power bases were validly reduced. Consistent with the findings by Raven et al (1998), these two dimensions were valid groupages:

5.3.1 Applying PCA to harsh power questions

The 18 harsh power questions were isolated. The means and standard deviations for each question's original sample result were obtained and used to create a covariance and correlation matrix.

From this, factor loading occurred; the Eigen values and factors were obtained, using the correlation matrix. The Eigen factors for PC1, PC2 … PC18 with their cumulative contribution percentages are shown in table 7. This indicated that 65% of the variation lay within the first four principal component sets.

Table 8 – Applying PCA to harsh power

Eigen Factor	%	% cum
7,9068991	44%	44%
1,629694556	9%	53%
1,300851288	7%	60%
0,919938292	5%	65%
0,801593106	4%	70%
0,740819104	4%	74%
0,563297475	3%	77%
0,51687698	3%	80%
0,515103009	3%	83%
0,486760746	3%	85%
0,433482215	2%	88%
0,390509148	2%	90%
0,369803174	2%	92%
0,334165248	2%	94%
0,314650773	2%	96%
0,281308724	2%	97%
0,269265438	1%	99%
0,224981626	1%	100%
18		

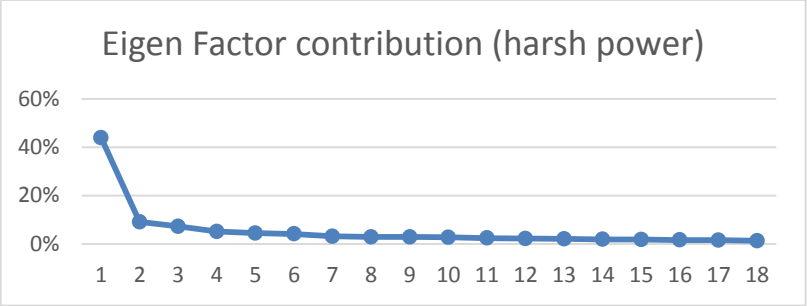

Figure 1 – Eigen Factor contribution (harsh power)

5.3.2 Applying PCA to soft power questions

Next, the 15 soft power questions were isolated. The means and standard deviations for each question's original sample result were obtained and used to create a covariance and correlation matrix.

From this, factor loading occurred; the Eigen values and factors were obtained, using the correlation matrix. The Eigen factors for PC1, PC2 … PC15 with their cumulative contribution percentages are shown in table 8. This indicated that 67% of the variation lay within the first four principal component sets.

Table 9 – Applying PCA to soft power

Eigen Factor	Contribution %	Cumm Contribution %
6,443321887	43%	43%
1,553731926	10%	53%
1,169745253	8%	61%
0,866232042	6%	67%
0,795962373	5%	72%
0,685126525	5%	77%
0,606308603	4%	81%
0,483650915	3%	84%
0,474365123	3%	87%
0,419075017	3%	90%
0,362622307	2%	92%
0,331167206	2%	95%
0,299180925	2%	97%
0,277467715	2%	98%
0,232042183	2%	100%

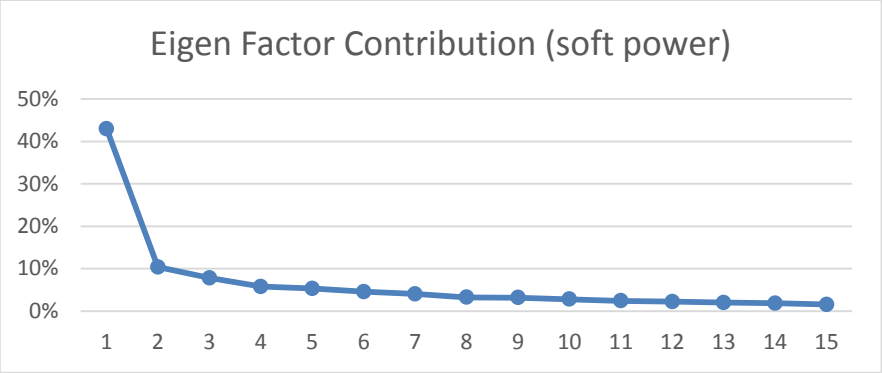

Figure 2 – Eigen factor contribution (soft power)

5.3.3 Applying PCA to all power questions

Next, the 33 power questions were isolated. The means and standard deviations for each question's original result sample were obtained and used to create a covariance and correlation matrix.

From this, factor loading occurred; the Eigen values & factors were obtained, using the correlation matrix. The Eigen factors for PC1, PC2 … PC33 with their cumulative contribution percentages were shown in table 9. This indicated that 63% of the variation lay within the first six principal component sets.

Table 10 – Applying PCA to all power

Eigen Factor	Contribution %	Cumm Contribution %
11,75052438	36%	35%
4,233165286	13%	48%
1,766609407	5%	53%
1,255718395	4%	57%
1,093616073	3%	60%
0,968151815	3%	63%
0,965729902	3%	66%
0,848543253	3%	69%
0,755839709	2%	71%
0,694164768	2%	73%
0,673028835	2%	75%
0,660287311	2%	77%
0,574706039	2%	79%
0,53072235	2%	81%
0,516291346	2%	82%
0,504571125	2%	84%
0,448613884	1%	85%
0,427993061	1%	87%
0,425944609	1%	88%
0,386134067	1%	89%
0,375552111	1%	90%
0,334808849	1%	91%
0,315237159	1%	92%
0,31266149	1%	93%
0,299020174	1%	94%
0,281314183	1%	95%
0,27740606	1%	96%
0,266692544	1%	97%
0,237849183	1%	97%
0,229413328	1%	98%
0,219484845	1%	99%
0,190039089	1%	99%
0,180165363	1%	100%

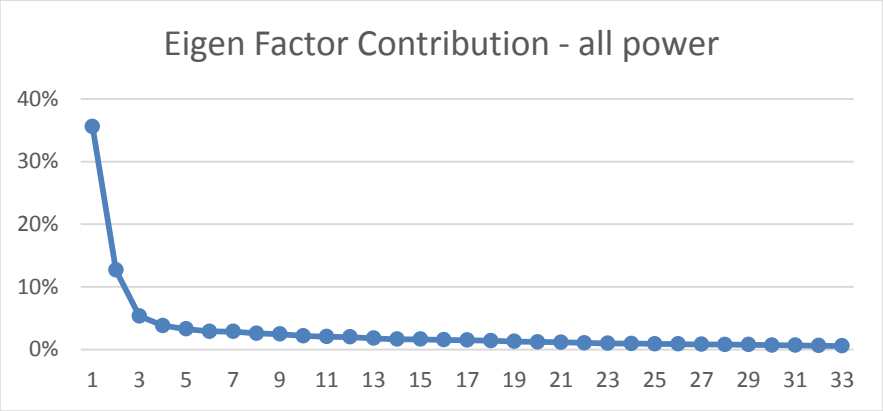

Figure 3 – Eigen factor contribution (all power)

Using the first two PC factor loading sets, the PC scores were obtained and plotted, indicating that the sample data points belong together (birds of a feather flock together); however, the representative percentage of variation was only at 48% (PC1 and PC2).

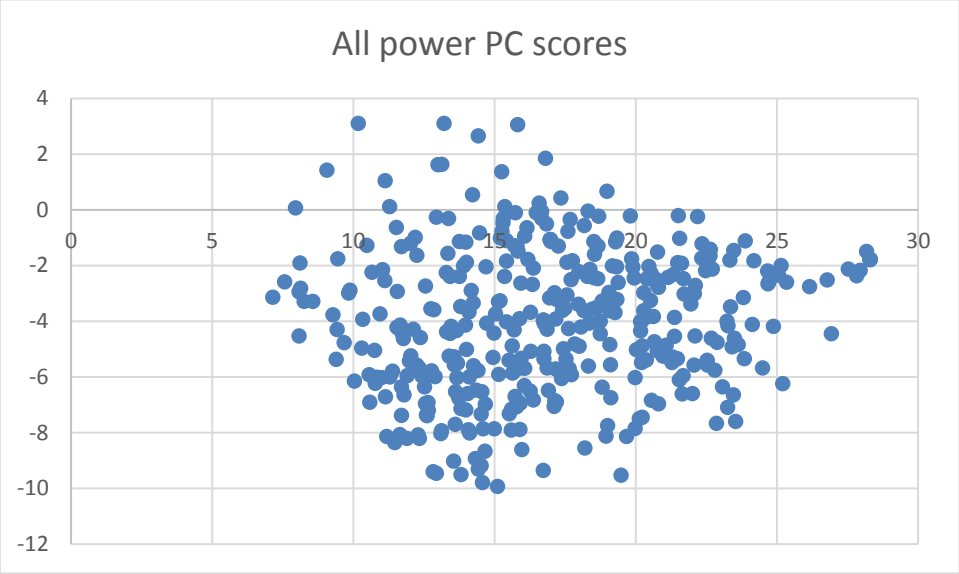

Figure 4 – All power PC scores

Next, the average scores of all the power questions were isolated. The means and standard deviations of the averages of the original result sample were obtained and used to create a covariance and correlation matrix.

From this, factor loading occurred; the Eigen values and factors were obtained, using the correlation matrix. The Eigen factors PC1, PC2 … PC11 with their cumulative

contribution percentages were shown in table 10. This indicated that 68% of the variation lay within the first two principal component sets.

Table 11 – PCA average all power

Eigen Factor	Contribution %	Cumm Contribution %
5,642723	51%	51%
1,825343	17%	68%
0,78972	7%	75%
0,539286	5%	80%
0,450934	4%	84%
0,396614	4%	88%
0,352066	3%	91%
0,326993	3%	94%
0,253612	2%	96%
0,235139	2%	98%
0,187571	2%	100%

Using the first two PC factor loading sets, the PC scores were obtained and plotted, indicating that the sample data points belong together (birds of a feather flock together). The representative percentage of variation is now at 68% (PC1 and PC2). This provides evidence that it is appropriate to dichotomise the eleven power bases into soft and harsh power.

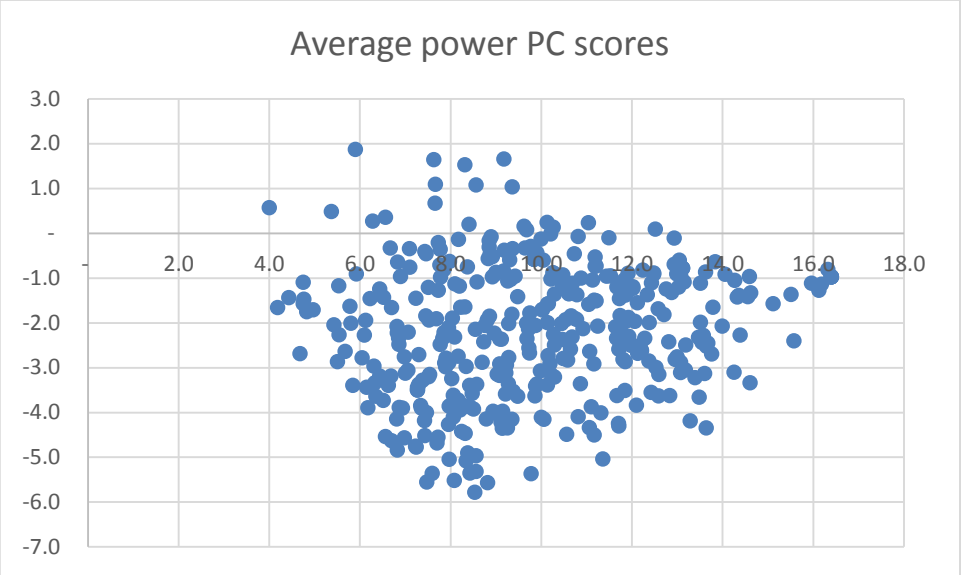

Figure 5 – Average power PC scores

5.4 Kaiser-Meyer-Olkin and Bartlett's test of sphericity

The Kaiser-Meyer-Olkin (''KMO'') and Bartlett's test of sphericity were enacted in order to test for sampling adequacy. The KMO measure yields values along a continuum of 0 to 1, with values above 0.70 generally considered to be acceptable. In this study the measure yielded a KMO score of 0.903 which indicates that factor analysis was appropriate. Bartlett's test of sphericity yielded a p value of 0.000 which indicates that the principal component analysis was suitable.

Table 12 – KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of		0.903
Bartlett's Test of Sphericity	Approx. Chi-Square	2617.624
	df	55
	Sig.	0

5.5 Profile of the sample group

This study was conducted within the ambit of the logistics industry in South Africa. A quantitative analysis was performed on the responses of employees with regards to certain questions posed regarding perceptions of their supervisor.

5.5.1 Organisational affiliation of the sample group

Table 13 provides a breakdown of the firms within the logistics industry from which the sample was drawn, together with the response rate that was obtained from each firm.

Table 13 – Organisational affiliation of the sample group

Name of company	Number of recipients	Number of incomplete responses	Number of complete responses
Super Group Ltd	2909	96	216
Barloworld Transport (Pty) Ltd	Unknown	6	26
GAC Laser International Logistics (Pty) Ltd	Unknown	5	90
Laser Logistics (Pty) Ltd	Unknown	9	53
Total	**Unknown**	**116**	**385**

A total of 501 survey responses were received. 116 of these fell below the tolerance level for completeness, and were therefore excluded from the analysis. The final sample for analysis consisted of 385 data sets. The majority of these respondents (56%) were employed by Super Group Ltd, and the smallest percentage, at 7%, were employed by Barloworld Transport (Pty) Ltd.

5.5.2 Gender representation

Table 14 provides a breakdown of the gender representation of the sample group.

Table 14 – Gender representation of the sample group

Respondent gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	178	46.2	46.2	46.2
	Male	207	53.8	53.8	100.0
	Total	385	100.0	100.0	

Supervisor gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	107	27.8	27.8	27.8
	Male	278	72.2	72.2	100.0
	Total	385	100.0	100.0	

46% of respondents were female employees, and 54% were male employees. The sample was therefore heterogeneous with regards to gender dispersion of the respondents. Of these, 28% reported having a female supervisor, compared to 72% who reported having a male supervisor.

5.5.3 Race representation

Table 15 provides a breakdown of the race profile of the sample group.

Table 15 – Race profile of the sample group

Respondent race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black	51	13.2	13.2	13.2
	Coloured	44	11.4	11.4	24.7
	Indian	36	9.4	9.4	34.0
	White	254	66.0	66.0	100.0
	Total	385	100.0	100.0	

The racial distribution of the sample was 66% white, 13.2% black, 11.4% coloured and 9.4% Indian. This demographic spread was skewed towards white respondents and was therefore not representative of the South African population as a whole.

5.5.4 Age composition of respondents

Table 16 provides a breakdown of the age composition of respondents.

Table 16 – Age composition of respondents

Respondent age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-20	1	.3	.3	.3
	21-29	86	22.3	22.3	22.6
	30-39	141	36.6	36.6	59.2
	40-49	90	23.4	23.4	82.6
	50-59	55	14.3	14.3	96.9
	60 or older	12	3.1	3.1	100.0
	Total	385	100.0	100.0	

The majority of respondents (36.6%) were between the ages of 30 and 39 years. The least represented group was for 18 to 20 years, with just one respondent (0.3%).

5.5.5 Job category representation

Table 17 provides a breakdown of the job category representation of respondents.

Table 17 – Job category representation

Respondent employment level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Executive	32	8.3	8.3	8.3
	Junior management	58	15.1	15.1	23.4
	Middle management	81	21.0	21.0	44.4
	Semi-skilled	65	16.9	16.9	61.3
	Senior management	50	13.0	13.0	74.3
	Skilled / professional	99	25.7	25.7	100.0
	Total	385	100.0	100.0	

Representation across the six job categories was evenly distributed, except for the executive category, which was to be expected.

5.5.6 Means and standard deviations

Table 18 – Means and standard deviations of all variables

	Males			Females		
	Mean	Std. Deviation	N	Mean	Std. Deviation	N
Mean Self-Awareness	3.6805	0.9716	278	3.7336	1.1044	107
Referent Power	3.3046	1.0609	278	3.4922	0.9962	107
Informational Power	3.7506	0.9857	278	3.8629	0.9723	107
Expert Power	3.3633	1.0546	278	3.5639	1.0673	107
Legitimacy/Dependence	3.5456	0.9113	278	3.5732	0.9235	107
Personal Reward	3.0144	1.1725	278	3.2928	1.1407	107
Mean Soft Power	3.3957	0.8210	278	3.5570	0.7884	107
Legitimacy/Position	3.4904	0.9579	278	3.7165	0.9722	107
Reward Impersonal	2.5635	1.1563	278	2.7321	1.1524	107
Legitimacy/Equity	2.4353	1.1915	278	2.6854	1.1885	107
Coercive Impersonal	2.3537	1.1828	278	2.3645	1.2170	107
Legitimacy/Reciprocity	2.5000	1.1136	278	2.6231	1.1235	107
Personal Coercion	2.5600	1.0985	278	2.7383	1.1574	107
Mean Harsh Power	2.6505	0.9001	278	2.8100	0.8679	107
Mean Total Power	2.9892	0.7854	278	3.1495	0.7289	107

The mean self-awareness score for males was 3.6805 and for females it was 3.73316. The highest mean power scores were for informational power, for both males and females, at 3.7506 and 3.8629 respectively. The lowest mean scores were for impersonal coercion, again for both males and females, at 2.3537 and 2.3645 respectively.

The sub-constructs of self-awareness were explored further by looking at the means for men and for women for each element making up the self-awareness dimension.

Table 19 – Means and standard deviations of self-awareness elements

	Females			Males		
	Mean	Std. Deviation	N	Mean	Std. Deviation	N
Seeks feedback to improve interactions with others	3.79	1.285	106	3.67	1.177	278
Accurately describes how others view his or her capabilities	3.54	1.215	107	3.49	1.122	277
Knows when it is time to reevaluate his or her position on important issues	3.73	1.246	106	3.69	1.077	276
Shows he or she understands how specific actions impact others	3.88	1.187	107	3.88	1.079	277

5.7 Inferential statistics

Inferential statistics are statistical methods that generalise sample findings to the broader population.

5.7.1 Normality

The question of normality is of importance when making inferences, and therefore the Kolmogorov-Smirnov and Shapiro-Wilk tests were run to test for normality of distribution of the variables:

Table 20 – Results of Kolmogorov-Smirnov and Shapiro-Wilk tests

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Self-Awareness	.130	385	.000	.937	385	.000
Reward Impersonal	.101	385	.000	.947	385	.000
Coercive Impersonal	.129	385	.000	.914	385	.000
Expert Power	.107	385	.000	.956	385	.000
Referent Power	.089	385	.000	.965	385	.000
Informational Power	.128	385	.000	.930	385	.000
Legitimacy/Position	.104	385	.000	.961	385	.000
Legitimacy/Reciprocity	.101	385	.000	.948	385	.000
Legitimacy/Dependence	.116	385	.000	.963	385	.000
Legitimacy/Equity	.104	385	.000	.933	385	.000
Personal Reward	.091	385	.000	.957	385	.000
Personal Coercion	.094	385	.000	.955	385	.000

a. Lilliefors Significance Correction

The results of the Kolmogorov-Smirnov test as well as the Shapiro-Wilk tests showed that the data were not normally distributed. Non-parametric testing in the form of Kendall rank correlation was therefore applied when analysing correlation between variables.

5.7.2 Chi-Square test for independence

The self-awareness measured was that from a subordinate perspective, and was therefore attributional. With relational self-awareness having been defined as the congruence in expectation between how a follower expects a leader to lead, and how the leader actually leads, it was necessary to test whether self-awareness was independent of demographic variables such as job category (implying the level of supervision), and age of the respondent. Accordingly, two chi-square tests for independence were applied.

5.7.2.1 Self-awareness and the level of supervision

$$H_0 = The\ Highest\ level\ of\ Supervision\ is\ independent\ of\ the\ Self - awareness\ Level\ rating\ received$$

Data were transformed by counting the ratings of each rating level (1-5) for each supervisory level (A-F), for each self-awareness question. Table 21 defines the

supervisory level with the assumption that F is the highest supervisory level, E the second highest, and so forth.

Table 21 – Categorisation of supervisory levels

Supervisory level Symbol	**Supervisory level Description**
A	Semi-skilled supervisor
B	Skilled/professional supervisor
C	Junior management supervisor
D	Middle management supervisor
E	Senior management supervisor
F	Executive supervisor

For each self-awareness question and supervisory level the following was obtained using the logic:

$$V_{x,y}Q_i = \sum Count_x\ (Q_i)_y$$

the value for the rating level of each self-awareness question for each supervisory level equals the sum of occurrence of the rating for each supervisory level for each self-awareness question.

Where

$$x = rating\ level\ ; \{1,2,3,4,5\}$$

$$y = Supervisory\ Level; \{A, B, C, D, E, F\}$$

$$Q_i = Self - Awareness\ Question\ ; i = \{1,2,3\}$$

and tabled as follows:

Table 22

Self-awareness question (Q_i)						
Rating 1	$V_{1,A}Q_i$	$V_{1,B}Q_i$	$V_{1,C}Q_i$	$V_{1,D}Q_i$	$V_{1,E}Q_i$	$V_{1,F}Q_i$
Rating 2	$V_{2,A}Q_i$	$V_{2,B}Q_i$	$V_{2,C}Q_i$	$V_{2,D}Q_i$	$V_{2,E}Q_i$	$V_{2,F}Q_i$
Rating 3	$V_{3,A}Q_i$	$V_{3,B}Q_i$	$V_{3,C}Q_i$	$V_{3,D}Q_i$	$V_{3,E}Q_i$	$V_{3,F}Q_i$
Rating 4	$V_{4,A}Q_i$	$V_{4,B}Q_i$	$V_{4,C}Q_i$	$V_{4,D}Q_i$	$V_{4,E}Q_i$	$V_{4,F}Q_i$
Rating 5	$V_{5,A}Q_i$	$V_{5,B}Q_i$	$V_{5,C}Q_i$	$V_{5,D}Q_i$	$V_{5,E}Q_i$	$V_{5,F}Q_i$

Four tables were obtained, one for each of the questions. The same logic was applied to the average rating across all the questions, but with the ratings grouped as shown in Table 23:

Table 23

AVERAGE	A	B	C	D	E	F
(1-2)	1	7	5	7	2	1
(2-3)	13	6	15	8	9	3
(3-4)	17	12	25	21	22	14
(4-5)	34	33	54	45	17	14

The Chi-test was applied to all four samples (questions 1-4 and the average). The null hypothesis is accepted when

$$P - value > \propto, \qquad where \ \propto is \ 0.05$$

The results were summarised in table 24 for each of the self-awareness questions and the average of all four questions:

Table 24

	Q1	Q2	Q3	Q4	Average
Samples Size	384	384	384	382	384
P-value	0,780	0,689	0,756	0,586	0,42
Alpha	0,05	0,05	0,05	0,05	0,05
Accept the Null hypothesis	Yes	Yes	Yes	Yes	Yes

The results show that the level of supervision was independent of the self-awareness rating.

5.7.2.2 Self-awareness and age of the respondent

$$H_0 = The \ age \ of \ the \ respondent \ is \ independent \ of \ the \ self - awareness \ level \ rating \ given$$

For each self-awareness question and age range of the respondent, the following was obtained using the logic:

$$V_{x,y}Q_i = \sum Count_x\,(Q_i)_y$$

the value for the rating level of each self-awareness question for each age range of the respondent equals the sum of occurrence of the rating for each range of age for each self-awareness question.

Where

$$x = rating\ level\ ; \{1,2,3,4,5\}$$

$$y = age\ range\ \{(18-20); (21-29); (30-39); (40-49); (50-59); (60\ or\ older)$$

$$Q_i = Self-Awareness\ Question\ ; i = \{1,2,3\}$$

and tabled as follows:

Table 25

Self-awareness question (Q_i)						
Rating 1	$V_{1,A}Q_i$	$V_{1,B}Q_i$	$V_{1,C}Q_i$	$V_{1,D}Q_i$	$V_{1,E}Q_i$	$V_{1,F}Q_i$
Rating 2	$V_{2,A}Q_i$	$V_{2,B}Q_i$	$V_{2,C}Q_i$	$V_{2,D}Q_i$	$V_{2,E}Q_i$	$V_{2,F}Q_i$
Rating 3	$V_{3,A}Q_i$	$V_{3,B}Q_i$	$V_{3,C}Q_i$	$V_{3,D}Q_i$	$V_{3,E}Q_i$	$V_{3,F}Q_i$
Rating 4	$V_{4,A}Q_i$	$V_{4,B}Q_i$	$V_{4,C}Q_i$	$V_{4,D}Q_i$	$V_{4,E}Q_i$	$V_{4,F}Q_i$
Rating 5	$V_{5,A}Q_i$	$V_{5,B}Q_i$	$V_{5,C}Q_i$	$V_{5,D}Q_i$	$V_{5,E}Q_i$	$V_{5,F}Q_i$

Four tables were obtained, one for each of the questions. The same logic was applied to the average rating across all the questions, but the ratings were grouped as shown in table 26:

Table 26

Average	18-20	21-29	30-39	40-49	50-59	60 +
(1-2)	1	5	7	7	2	1
(2-3)	13	15	6	8	9	3
(3-4)	17	25	12	21	22	14
(4-5)	34	54	33	45	17	14

The null hypothesis is accepted when

$$P - value > \propto, \qquad where \ \propto is \ 0.05$$

The results were tabled in table 27 for each of the self-awareness questions and the average of all four questions:

Table 27

	Q1	Q2	Q3	Q4	Average
Samples size	384	383	383	384	385
P-value	0,93	0,98	0,98	1,00	0,42
Alpha	0,05	0,05	0,05	0,05	0,05
Accept the Null hypothesis	Yes	Yes	Yes	Yes	Yes

The results show that the age of the respondent was independent of the self-awareness rating.

5.8 Presentation of findings - linear regression

Linear regression was used to analyse the data. This is a statistical method that aims to quantify the relationship between variables, and measure the strength of the relationship between the research variables (Wegner, 2012). Data were analysed separately for male and for female supervisors, and then the correlation coefficients were compared. The results for each power base are summarised within a table, and will be presented within the context of each research hypothesis.

Table 28 - Results of Kendall rank correlation for self-awareness and the soft and harsh power bases for males and females combined

		Self-Awareness
Total Power	Correlation Coefficient	.198**
	Sig. (2-tailed)	0.000
	N	385
Mean Soft Power	Correlation Coefficient	.340**
	Sig. (2-tailed)	0.000
	N	385
Mean Harsh Power	Correlation Coefficient	0.061
	Sig. (2-tailed)	0.085
	N	385

Table 29 - Results of Kendall rank correlation for self-awareness and the 11 power bases

		Male	Females
Self-Awareness	Correlation Coefficient	1	1
	Sig. (2-tailed)	.	.
	N	278	107
Referent Power	Correlation Coefficient	.376**	.230**
	Sig. (2-tailed)	0	0.001
	N	278	107
Informational Power	Correlation Coefficient	.339**	.358**
	Sig. (2-tailed)	0	0
	N	278	107
Expert Power	Correlation Coefficient	.320**	0.09
	Sig. (2-tailed)	0	0.206
	N	278	107
Legitimacy/Dependenc	Correlation Coefficient	.214**	.151*
	Sig. (2-tailed)	0	0.033
	N	278	107
Personal Reward	Correlation Coefficient	.267**	.171*
	Sig. (2-tailed)	0	0.015
	N	278	107
Mean Soft Power	Correlation Coefficient	.375**	.243**
	Sig. (2-tailed)	0	0
	N	278	107
Legitimacy/Position	Correlation Coefficient	.197**	0.044
	Sig. (2-tailed)	0	0.541
	N	278	107
Reward Impersonal	Correlation Coefficient	.176**	-0.023
	Sig. (2-tailed)	0	0.74
	N	278	107
Legitimacy/Equity	Correlation Coefficient	.175**	-0.038
	Sig. (2-tailed)	0	0.591
	N	278	107
Coercive Impersonal	Correlation Coefficient	-0.065	-.221**
	Sig. (2-tailed)	0.137	0.002
	N	278	107
Legitimacy/Reciprocity	Correlation Coefficient	.149**	-0.047
	Sig. (2-tailed)	0.001	0.505
	N	278	107
Personal Coercion	Correlation Coefficient	0.053	-0.122
	Sig. (2-tailed)	0.227	0.086
	N	278	107
Mean Harsh Power	Correlation Coefficient	.126**	-0.092
	Sig. (2-tailed)	0.003	0.177
	N	278	107

* Correlation is not significant where $p < 0.05$

Table 30 - Results of Kendall rank correlation analysis for the 11 bases of power and components of self-awareness sub-construct

		Q1: Seeks feedback to improve interactions with others		Q2: Accurately describes how others view his or her capabilities		Q3: Knows when it is time to reevaluate his or her position on important issues		Q4: Shows he or she understands how specific actions impact others		Total Self-Awareness		
		Females	Males	Females	Males	Females	Males	Females	Males	Females	Males	Total
Mean Soft Power	Correlation Coefficient	.206**	.330**	.202**	.356**	.300**	.343**	.286**	.364**	.243**	.375**	.340**
	Sig. (2-tailed)	0.005	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Referent Power	Correlation Coefficient	.204**	.347**	.191*	.371**	.257**	.329**	.269**	.372**	.230**	.376**	.336**
	Sig. (2-tailed)	0.007	0.000	0.011	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.000
Informational Power	Correlation Coefficient	.297**	.286**	.334**	.295**	.425**	.335**	.384**	.356**	.358**	.339**	.348**
	Sig. (2-tailed)	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Expert Power	Correlation Coefficient	0.092	.287**	0.049	.305**	.174*	.293**	.150*	.323**	0.09	.320**	.257**
	Sig. (2-tailed)	0.227	0.000	0.516	0.000	0.022	0.000	0.05	0.000	0.206	0.000	0.000
Legitimacy/ Dependence	Correlation Coefficient	.153*	.197**	0.134	.197**	.160*	.186**	0.145	.217**	.151*	.214**	.195**
	Sig. (2-tailed)	0.046	0.000	0.077	0.000	0.036	0.000	0.059	0.000	0.033	0.000	0.000
Personal Reward	Correlation Coefficient	0.114	.242**	0.14	.277**	.210**	.247**	.219**	.228**	.171*	.267**	.241**
	Sig. (2-tailed)	0.135	0.000	0.062	0.000	0.006	0.000	0.004	0.000	0.015	0.000	0.000
Mean Harsh Power	Correlation Coefficient	-0.082	.112*	-0.112	.160**	-0.079	.101*	-0.095	0.081	-0.092	.126**	0.061
	Sig. (2-tailed)	0.265	0.013	0.123	0.000	0.283	0.026	0.198	0.075	0.177	0.003	0.085
Legitimacy/ Position	Correlation Coefficient	0.01	.153**	0	.187**	0.116	.187**	0.098	.217**	0.044	.197**	.154**
	Sig. (2-tailed)	0.892	0.001	0.996	0.000	0.129	0.000	0.201	0.000	0.541	0.000	0.000
Reward Impersonal	Correlation Coefficient	-0.008	.153**	-0.04	.215**	-0.026	.153**	-0.045	.131**	-0.023	.176**	.120**
	Sig. (2-tailed)	0.913	0.001	0.597	0.000	0.727	0.001	0.553	0.006	0.74	0.000	0.001
Legitimacy/ Equity	Correlation Coefficient	0.011	.179**	-0.053	.175**	-0.041	.144**	-0.065	.136**	-0.038	.175**	.112**
	Sig. (2-tailed)	0.888	0	0.485	0.000	0.588	0.002	0.395	0.004	0.591	0.000	0.003
Coercive Impersonal	Correlation Coefficient	-.225**	-0.053	-.218**	-0.012	-.223**	-0.091	-.243**	-.096*	-.221**	-0.065	-.116**
	Sig. (2-tailed)	0.003	0.255	0.004	0.797	0.004	0.055	0.002	0.044	0.002	0.137	0.002
Legitimacy/ Reciprocity	Correlation Coefficient	-0.028	.135**	-0.063	.170**	-0.032	.133**	-0.073	.099*	-0.047	.149**	.088*
	Sig. (2-tailed)	0.715	0.004	0.406	0.000	0.674	0.005	0.335	0.037	0.505	0.001	0.017
Personal Coercion	Correlation Coefficient	-0.123	0.043	-0.127	.094*	-0.12	0.041	-0.095	0.006	-0.122	0.053	0.002
	Sig. (2-tailed)	0.106	0.359	0.091	0.045	0.116	0.385	0.215	0.891	0.086	0.227	0.966
Total Power	Correlation Coefficient	0.046	.228**	0.023	.266**	0.093	.221**	0.085	.221**	0.062	.254**	.198**
	Sig. (2-tailed)	0.533	0.000	0.752	0.000	0.204	0.000	0.245	0.000	0.364	0.000	0.000

5.8.1 Research hypothesis 1 – The relationship between a leader's perceived self-awareness and the bases of their power overall

The Kendall rank correlation coefficient between self-awareness (the independent variable) and total power (the dependent variable) for males and females combined was statistically significant at a probability (''p'') value of 0.000. Kendall's tau coefficient was 0.198 and by applying Cohen's (1992) standard for effect size, this infers a small strength positive association between the variables.

The research therefore fails to reject H_1 which hypothesised that there was a positive relationship between perceptions of a leader's self-awareness and the bases of power overall.

5.8.2 Research hypothesis 2 – The relationship between a leader's perceived self-awareness and the bases of their soft power

The Kendall rank correlation coefficient between self-awareness and soft power for males and females combined was statistically significant at a p value of 0.000. Kendall's tau coefficient was 0.340 and by applying Cohen's (1992) standard for effect size, this inferred a medium strength positive association between the variables.

The research therefore fails to reject H_1 which hypothesised that there was a significant positive relationship between perceptions of a leader's self-awareness and the bases of their soft power.

Since the research hypothesised that gender would emerge as a moderating variable, it was necessary to present the results for each power base making up total soft power, individually and by gender:

5.8.2.1 Referent power

For males, the mean score for referent power was 3.3046 with a standard deviation of 1.0609. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall's tau coefficient was 0.376 inferring a medium strength positive association between self-awareness and referent power.

For females, the mean score for referent power was 3.34922 with a standard deviation of 0.9962. The Kendall rank correlation coefficient was statistically significant at a p value of 0.001. Kendall's tau coefficient was 0.230 inferring a small strength positive association between self-awareness and referent power.

Since referent power yielded the highest coefficient of determination for males, further analysis was conducted to show the effect of each of the four questions making up the self-awareness sub-construct on referent power. The results are shown in table 30. The greatest strength of association was a Kendall tau coefficient of 0.372 for the question ''shows he or she understands how specific actions impact others''; the smallest, although still a medium effect size, was 0.329 for the question ''knows when it is time to re-evaluate his or her position on important issues''.

5.8.2.2 Informational power

For males, the mean score for informational power was 3.7506 with a standard deviation of 0.9857. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall's tau coefficient was 0.339 inferring a medium strength positive association between self-awareness and informational power.

For females, the mean score for informational power was 3.8629 with a standard deviation of 0.9723. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall's tau coefficient was 0.358 inferring a medium strength positive association between self-awareness and informational power.

Since informational power yielded the highest Kendall tau coefficient of determination for females, further analysis was conducted to show the effect of each of the four questions making up the self-awareness sub-construct on informational power. The results are shown in table 30. The greatest strength of association was a Kendall tau coefficient of 0.425 for the question 'knows when it is time to re-evaluate his or her position on important issues''; the smallest, although still a medium effect size, was 0.297 for the question 'seeks feedback to improve interactions with others''.

5.8.2.3 Expert power

For males, the mean score for expert power was 3.3633 with a standard deviation of 1.0546. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall's tau coefficient was 0.320 inferring a medium strength positive association between self-awareness and expert power.

For females, the mean score for expert power was 3.5639 with a standard deviation of 1.0673. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.206 illustrating no relationship between the variables.

This was the only soft power base where there was no significant correlation with female self-awareness, and therefore further analysis was conducted to show the effect of each of the four questions making up the self-awareness sub-construct on expert power. The results are shown in table 30. Two of the four questions had no significant impact, these being ''seeks feedback to improve interactions with others'' and ''accurately describes how others view his or her capabilities''. There were however small strength positive associations between the questions ''knows when it is time to re-evaluate his or her position on important issues'' at a Kendall tau coefficient

of 0.174, and ‘’shows he or she understands how specific actions impact others’’ at a Kendall tau coefficient of 0.150.

5.8.2.4 Legitimacy of dependence power

For males, the mean score for legitimacy of dependence power was 3.5456 with a standard deviation of 0.9113. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall’s tau coefficient was 0.214 inferring a small positive strength of association between self-awareness and the legitimacy of dependence power.

For females, the mean score for legitimacy of dependence power was 3.5732 with a standard deviation of 0.9235. The Kendall rank correlation coefficient was statistically significant at a p value of 0.033. Kendall’s tau coefficient was 0.151 inferring a small positive strength of association between self-awareness and the legitimacy of dependence power.

Of all soft bases of power, the impact between self-awareness and the legitimacy of dependence was the lowest for both men and women.

5.8.2.5 Personal reward power

For males, the mean score for personal reward power was 3.0144 with a standard deviation of 1.1725. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall’s tau coefficient was 0.267 inferring a small positive strength of association between self-awareness and personal reward power.

For females, the mean score for personal reward power was 3.2928 with a standard deviation of 1.1407. The Kendall rank correlation coefficient was statistically significant at a p value of 0.015. Kendall’s tau coefficient was 0.171 inferring a small positive strength of association between self-awareness and personal reward power.

5.8.3 Research hypothesis 3 – The relationship between a leader’s perceived self-awareness and the bases of their harsh power

The Kendall rank correlation coefficient between self-awareness and harsh power for males and females combined was not statistically significant at a p value of 0.085.

The research therefore fails to accept H_2 which hypothesised that there was a significant positive relationship between perceptions of leader's self-awareness and the bases of their harsh power.

Since the research hypothesised that gender would emerge as a moderating variable, it was necessary to discuss the results for each power base making up total harsh power, individually and by gender:

5.8.3.1 Legitimacy of position power

For males, the mean score for legitimacy of position power was 3.4904 with a standard deviation of 0.9579. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall's tau coefficient was 0.197 inferring a small strength of association between self-awareness and legitimacy of position power. This was the harsh power base most impacted by male self-awareness.

For females, the mean score for legitimacy of position power was 3.7165 with a standard deviation of 0.9722. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.541, illustrating no inferable relationship between the variables.

5.8.3.2 Impersonal reward power

For males, the mean score for impersonal reward power was 2.5635 with a standard deviation of 1.1563. The Kendall rank correlation coefficient was statistically significant at a p value of 0.00. Kendall's tau coefficient was 0.176 inferring a small positive strength of association between self-awareness and impersonal reward power.

For females, the mean score for impersonal reward power was 2.7321 with a standard deviation of 1.1524. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.74, illustrating no inferable relationship between the variables.

5.8.3.3 Legitimacy of equity power

For males, the mean score for legitimacy of equity power was 2.4353 with a standard deviation of 1.1915. The Kendall rank correlation coefficient was statistically significant

at a p value of 0.00. Kendall's tau coefficient was 0.175 inferring a small positive strength of association between self-awareness and the legitimacy of equity power.

For females, the mean score for legitimacy of equity power was 2.6854 with a standard deviation of 1.1885. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.591, illustrating no inferable relationship between the variables.

5.8.3.4 Impersonal coercive power

For males, the mean score for impersonal coercive power was 2.3537 with a standard deviation of 1.1828. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.137, illustrating no inferable relationship between the variables.

For females, the mean score for impersonal coercive power was 2.3645 with a standard deviation of 1.2170. The Kendall rank correlation coefficient was statistically significant at a p value of 0.002. Kendall's tau coefficient was -.221 indicating a small negative association between self-awareness and impersonal coercive power.

The coercive power bases, both personal and impersonal, were the only harsh power bases which were not statistically significant in relation to male self-awareness. Interestingly, impersonal coercion was the only harsh power base which was significantly correlated to female self-awareness, although the relationship was inverse.

5.8.3.5 Legitimacy of reciprocity power

For males, the mean score for legitimacy of reciprocity power was 2.5000 with a standard deviation of 1.1136. The Kendall rank correlation coefficient was statistically significant at a p value of 0.001. Kendall's tau coefficient was 0.149 inferring a small positive strength of association between self-awareness and the legitimacy of reciprocity power.

For females, the mean score for legitimacy of reciprocity power was 2.6231 with a standard deviation of 1.1235. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.505, illustrating no inferable relationship between the variables.

5.8.3.6 Personal coercive power

For males, the mean score for personal coercive power was 2.5600 with a standard deviation of 1.0985. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.227, illustrating no inferable relationship between the variables.

For females, the mean score for personal coercive power was 2.7383 with a standard deviation of 1.1574. The Kendall rank correlation coefficient was not statistically significant at a p value of 0.086, illustrating no inferable relationship between the variables.

5.8.4 Research hypothesis 4 – The influence of perceptions of a leader's self-awareness on the bases of their social power is greater in the context of soft power than harsh power

The first research question hypothesised that there was a significant positive relationship between perceptions of a leader's self-awareness and the bases of their power overall, and the results of the study have failed to reject this hypothesis for the sample overall since at a p value of 0.000, the correlation coefficient of 0.198 was statistically significant.

The second research question hypothesised that there was a significant positive relationship between perceptions of a leader's self-awareness and the bases of their soft power, and the results of the study have failed to reject this hypothesis for the sample overall since at a p value of 0.000, the correlation coefficient of 0.340 was statistically significant.

The third research question hypothesised that there was a significant positive relationship between perceptions of a leader's self-awareness and the bases of their harsh power, and the results of the study have rejected this hypothesis for the sample overall since the correlation was not statistically significant. However, further analysis showed that if the sample data were segregated between males and females, although the female sample yielded no significance, the male sample did; at a p value of 0.003, the Kendall rank correlation coefficient was statistically significant and that self-awareness explained 12.6% of the variance in attributions of mean harsh power for male leaders.

The results clearly show that the influence of perceptions of a leader's self-awareness on the bases of their social power is far greater in the context of soft power than harsh power, and the research thus fails to reject H_4. The caveat that the impact on harsh power is distinct by gender leads to the fifth research question, which proposes that gender acts as a moderator.

5.8.5 Gender as a moderator

The observed results for the second research hypothesis showed a difference not only in the number of power bases that were impacted by perceived self-awareness, by gender, but also that the salience of impact did not follow the same rank order, by gender. All five of the soft bases of power were statistically significant for males; however the impact on expert power was not statistically significant for females. In terms of weight of significance, the greatest impact for males was on referent power, yet for females the greatest impact was on informational power.

The observed results for the third research hypothesis showed that although correlation between perceived self-awareness and the harsh bases of power was not significant for the sample overall, it was in fact significant for males, with a Kendall tau correlation coefficient of 0.126. There was no significance for females on aggregate; however an analysis of the individual bases revealed a significant negative correlation for women between perceived self-awareness and the power of impersonal coercion. For males, there was no statistical significance with this base; however legitimate position, impersonal reward, legitimate equity and legitimate reciprocity were all significant for men.

The research therefore fails to reject H_5 which stated that gender moderates the influence of perceptions of a leader's self-awareness on their bases of power.

5.8.6 Conclusion

The aim of this chapter was to present the results obtained from the survey in order to answer the research questions of this study. A factorial analysis of the sub-constructs within the survey showed that the data were valid and reliable. Kendall's non-parametric correlation testing was conducted to test the association between each of the eleven bases of power in the IPI, categorised as either soft power or harsh power, and self-awareness. Independent tests were run for males and for females.

It was found in H_1 that there was a significant positive correlation between a leader's perceived self-awareness and the bases of their power overall.

H_2 demonstrated that there was a significant positive relationship between a leader's perceived self-awareness and the soft bases of their power for both men and women.

H_3 demonstrated that only male perceived self-awareness was positively correlated with attributions of harsh power, resulting in H_4 confirming that the influence of perceptions of a leader's self-awareness on the bases of their social power is far greater in the context of soft power than harsh power.

Finally, to conclude with H_5, it was found that the existence of a relationship (or not), and the weight of impact, did diverge by gender across the bases. Informational power was the base most impacted for women, and referent power was the base most impacted for men.

The subsequent chapter will discuss these results in the context of what has been understood in the literature.

CHAPTER 6: Discussion of results

6.1 Introduction

The study sought to understand the gender moderated effect of perceived leader self-awareness on follower attributions of social power. This chapter discusses the results, as laid out in chapter five, of each research hypothesis and in the context of the theory base examined in chapter two.

The descriptive stats provide evidence that the logistics industry is indeed male dominated: 53.8% of respondents were male and 46.2% were female, and 72.2% of respondents reported having a male supervisor.

Interestingly, females had a higher total power rating than males at 3.1495 compared to 2.9892; this result was surprising given that the industry sampled was male dominated, but may provide evidence for the double standards of competence phenomenon, i.e. the process by which bias can affect the assessment of ability that is inferred from performance (Rosette & Tost, 2010); that is, successful women leaders in this male dominated industry were perceived to possess exceptional capability in that they had achieved success in spite of the perceived challenges presented by gender stereotype.

It is also noteworthy that the females sampled had a higher mean self-awareness rating than males, at 3.7336 compared to 3.6805.

There was a significant positive correlation for males and for females between perceived self-awareness, and soft power. Harsh power was positively correlated with self-awareness for males only. The dichotomy of power into just two bases is in some respects parsimonious, in that it inhibits a more complete understanding of how dynamic the responses accompanying a power attempt can be (Kasulis and Spekman, 1980). The discussion will therefore also address the results for the power bases at individual levels.

Providing evidence for H_5, gender moderates the impact of perceptions of self-awareness on social power in that power is not impacted in the same way for males as is for females. Gender differences are inherent - and as much as leaders need to be true to themselves on an individual level (‘’I’’), they too need to be true to themselves as members of a collective (‘’us’’) (Steffens et al., 2016).

Finally, discussion of the results must be preceded by a caveat; although meaningful interactions were observed between perceived self-awareness and certain categories of gender moderated power, they do not imply causality, and therefore the inferences that will be made are only suggestive and not conclusive. Nevertheless, exploring these interactions may provide direction for future research.

6.2 Research hypothesis 1 – The relationship between a leader's perceived self-awareness and the bases of their power overall

The results of the first research hypothesis suggest that, consistent with theoretical predictions, follower perceptions of a leader's self-awareness were positively correlated to attributions of social power overall.

Subasic et al. (2011) highlighted that the psychological relationship that exists between leaders and followers plays a fundamental role in the attainment of power, in that how a follower understands and relates to their leader's expression of values and self-awareness can yield a significant influence process (Ilies et al., 2005).

Depending on whether a leader is perceived as an in-group or out-group member, as well as his/her purpose within the context, he/she may be expected to act in a certain way (Aiello, Pratto & Pierro, 2013). Certain dynamics may require that the leader resort to coercive power tools and this would be an effective influence attempt if the leader was perceived as being relationally authentic under the circumstances (Aiello et al., 2013; Carli, 1999; Subasic et al., 2011).

Self-awareness is an important dimension of authentic leadership (Walumbwa et al., 2008) and it follows then that relational authenticity is in large part an outcome of perceived self-awareness. So long as a leader is perceived as being self-aware, he/she may well be bestowed power relative to what has been cognitively contracted; this suggestion is congruent with Zhao et al., (2016) who explored the concept of relational power as an expansion on the taxonomy of power existing either by virtue of formal position or personal attribute (Bass, 1960).

This study employed the IPI as an interpreting tool in measuring interpersonal power. While the results of H_1 demonstrated that there was a significant positive relationship between perceived self-awareness and interpersonal power overall, the factor loading of a principle component analysis confirmed that 68% of the variation lay within the first two principal component sets – harsh power and soft power. It was therefore requisite

to explore the relationship between perceived self-awareness and each of these principle component sets.

6.3 Research hypothesis 2 – The relationship between a leader's perceived self-awareness and the bases of their soft power

The results of the second research hypothesis suggest that, consistent with theoretical predictions, follower perceptions of a leader's self-awareness were positively correlated to attributions of the soft bases of social power.

6.3.1 Referent power

Referent power derives from relationships, being based on perceptions of social skill and the general possession of the communal traits more typically associated with women (Carli, 1999). This may explain why women in this study had a higher mean score for referent power (3.4922) than men (3.3046). It is notable however that the impact of self-awareness on referent power was 1.6 times as large for men as for women, at a Kendall rank correlation of 0.376 versus 0.230; in fact, referent power was the power base most significantly impacted for men by an increase in perceptions of self-awareness.

Referent power probabilistically fosters identification with a leader (Kasulis and Spekman, 1980), where a follower adopts behaviour because it is associated with a satisfying self-defining relationship with the leader or to the group (Kelman, 1961). Liu et al. (2015) proposed that prescriptive gender stereotypes constrain men from performing relational and communal displays of leadership; the results of this study show that males who are perceived to be more self-aware, are attributed significantly more referent power.

Lord and Halls' (2005) identification of authenticity at a relational or collective level is apt in that relational power is further defined by Zhao et al. (2016) as being borne of personal connections with others; and as Walumbwa et al. (2008) described, self-aware individuals display high levels of self-esteem and are thus more comfortable forming genuine relationships with others. It follows that if referent power is derived from relationships (Carli, 1999) then relationally perceived self-aware individuals will increase their attributions of referent power, and men more so than women because

women are naturally stereotyped as being communal anyway (Glass & Cook, 2016; Liu et al, 2015).

6.3.2 Informational power

The impact of perceived self-awareness on attributions of informational power was higher for women than for men, at a correlation of 0.358 versus 0.339, and in fact had the highest association for self-aware women across all power bases.

Eyuboglu and Atac (1991) suggested that informational power could be interpreted as control over the informational environment, being in control of the flow of information and with the ability to absorb any uncertainty surrounding it. The greatest association for informational power for women derived from the question ‘’knows when it is time to re-evaluate his or her position on important issues’’, at a correlation of 0.425. This suggests a trust-based outcome, highlighting the perceived ability of the leader to absorb uncertainty around information, and resulting in the internalised-based behaviour that Kasulis and Spekman (1980) argued was a follower outcome of the exercise of informational power.

Moreover, Kasulis and Spekman (1980) described informational power as the ability to persuade others as to the merits of one’s position. Indeed, these authors further demonstrated that informational power is the most influential of all of the bases of power in that influence is operationalised as a result of internalisation due to value congruence, and that the outcome is long-lasting.

This result is exciting for women leaders, as it demonstrates a means for gaining not only increased power, but increased power of the nature that yields the most effective outcome.

6.3.3 Expert power

It is noteworthy that, although the sample is derived from a male-dominated industry, the mean rating for expert power was higher for women than for men, at 3.633 compared with 3.5639; perhaps, due to ratings of power being assigned by subordinates, evaluations of women were less stereotypical because the respondents had more information about the individual that they evaluated by virtue of having worked directly with them, and the continued exposure over time resulted in less reliance on prescriptions about gender stereotyping (Carli, 1999; Vial et al., 2016).

It is also interesting that self-awareness of male leaders had a significant impact on perceptions of their expert power, at a correlation coefficient of 0.320 whereas for women leaders there was no significant relationship. A possible explanation is that the self-awareness perceived was relational, and that the more males were perceived to act within their gender roles in a male dominated industry, the greater their perceived expert power.

A curious finding was that while informational power was positively correlated with self-awareness for women, there was no significant relationship between female self-awareness and expert power, even though Eyuboglu and Atac (1991) had shown that although clearly distinct, the two power bases were both attributed based on competence, with expert power being based on perceived competence and informational power being based on actual competence.

The schism in results is apparent in two questions which yielded no significant correlation for females and expert power, yet yielded good correlations with females and informational power: ''seeks feedback to improve interactions with others'' and ''accurately describes how others view his or her capabilities''. It is really interesting that the converse applied for males, where correlations for these two questions loaded in reverse prominence compared to females.

Table 31 - Extraction of Kendall rank correlation analysis for informational and expert power and components of the self-awareness sub-construct

		Q1: Seeks		Q2: Accurately		Q3: Knows when it		Q4: Shows he or	
		Females	Males	Females	Males	Females	Males	Females	Males
Informational Power	Correlation Coefficient	.297**	.286**	.334**	.295**	.425**	.335**	.384**	.356**
	Sig. (2-tailed)	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000
Expert Power	Correlation Coefficient	0.092	.287**	0.049	.305**	.174*	.293**	.150*	.323**
	Sig. (2-tailed)	0.227	0.000	0.516	0.000	0.022	0.000	0.05	0.000

Again this is an important finding in understanding how women can increase influence among followers. Expert power fosters follower identification, but informational power fosters internalisation. Each self-awareness question for females loaded a higher correlation on informational power than on expert power, yet only two of the self-awareness questions loaded higher correlations on informational power for men. This

implies that self-awareness has greater potential for women to increase their influence, than it does for men.

6.3.4 Legitimacy of dependence power

Dependency is an indirect strategy (Carli, 1999), and the results of this study which show that women have higher power of dependence than men, is consistent with extant research which shows that women rely on more indirect influence strategies compared with men who have a preference for direct strategies (Carli, 1999; Williams & Tiedens, 2015). It makes sense then that the effect of implicit dominance such as legitimacy of dependence would be to a greater extent impacted by leader self-awareness for males than females, as the influencing strategy fails to interrupt social interaction (Williams & Tiedens, 2015). Nevertheless, Kendall's tau coefficient was significant for both males and females, at 0.214 and 0.151 respectively. The correlation was 0.195 for the total sample.

Having explained the justification for relating legitimate dependence power as per Raven et al. (1998) with traditional legitimate dependence power as per Kasulis and Spekman (1980), it follows that legitimate dependence power is an identification-based relationship which results in internalisation of an influence attempt. Vial et al. (2016) argued that status attributions mediate whether legitimacy is just positional or whether it is able to transcend to dependency, where respect and admiration are an important legitimising force. In this study, while women had higher mean scores than men for this power base at 3.5732 compared with 3.5456, increased self-awareness had a higher correlation for men than women at 0.214 compared with 0.151, perhaps indicating that self-awareness increases status attributions of a male leader more so than for women.

Co-operation as a result of this power base would not be as long-run as it would for informational power. The durability of cooperation is dependent on the stability of the relationship and is limited to those situations where followers accept the basis for legitimacy (Kasulis and Spekman, 1980). This again demonstrates the superiority of informational power in that the provision and dissemination of useful information can be manipulated, making this power base more flexible and therefore more durable than legitimate dependence power (Kasulis and Spekman, 1980).

6.3.5 Personal reward power

The higher mean score for personal reward power for women (3.2928) compared to men (3.0144) is consistent with Raven et al.s' (1998) proposition that due to communality, women are more likely than men to employ personal reward power. Additionally, it to some extent corroborates the statement that women are held to a higher standard of 'niceness' (Rudman and Glick, 1999).

Interestingly, although Kendall's tau coefficient inferred small associations between personal reward power and perceived self-awareness for both men and women, further analysis of how the perceived self-awareness was constructed, and the correlations between personal reward power and each self-awareness sub-construct, revealed divergence across gender.

The highest effect size for males was for the question ''accurately perceives how others view his/her capabilities'' at a correlation coefficient of 0.277; however for females, this question did not yield a significant correlation i.e. irrespective of how self-aware a woman leader was perceived to be, it did not impact the amount of 'niceness' or 'praise' she was perceived as likely to employ in her exercise of power. For females, this question instead had its strongest strength of association with informational power.

Similarly, for the question ''seeks feedback to improve interactions with others'', this yielded a correlation of 0.242 for males, yet no significance for females. This question specifically addresses communality and relationships and therefore is consistent with Sturm and Antonakis (2015) who put forward that interpersonal relationships, particularly in the context of managing alliances, are antecedents to power. This seems to hold truer for the males in this study due to their lower attributional prescriptions of communality, and that seeking an improvement in interactions is seen to be stepping out of an exchange orientation and into a relationship one (Vescio et al., 2003).

The remaining two questions, being ''knows when it is time to re-evaluate his/her position on important issues'' and ''shows he/she understands how specific actions impact others'' were significant for both males and females but with small effect sizes.

6.4 Research hypothesis 3 – The relationship between a leader's perceived self-awareness and the bases of their harsh power

The results showed that for the sample overall, there was no statistical significance in the relationship between a leader's perceived self-awareness and attributions of the harsh bases of power. This result makes the dichotomy between soft and harsh power rather pervasive, and future research should look at the effectiveness of harsh power in comparison to soft power, in field studies.

When the results for males were viewed in isolation to the results for females, it was interesting to note that although the female sample yielded no significance, the male sample did. Since the research hypothesised that gender would emerge as a moderating variable, it was necessary to discuss the results for each power base making up total harsh power, individually and by gender.

6.4.1 Legitimacy of position power

Vial et al. (2015) defined legitimacy as ''the sense of obligation or duty to comply freely with the decision and directions of authorities'' (pg. 1). They argued that increased self-awareness could attenuate the cycle of illegitimacy for women leaders; but this study has shown that this only holds true for legitimacy of dependence, and not for the other three legitimacy power bases, including the legitimate power of position; there was no significance for women leaders, but the correlation for male leaders was statistically significant and yielded a tau coefficient of 0.197.

Vial et al.s' definition clearly connects with Raven et al.s' (1998) definition of positional power, in that the follower accepts that assistance is required but does not internalise the required behaviour. The cognitive outcome of this influence tactic is mere compliance, although of the three power bases probabilistically associated with compliance, legitimacy of position power has the greatest probability of long-run co-operation (Kasulis and Spekman, 1980).

6.4.2 Impersonal reward power

For males, Kendall's tau coefficient was 0.176 inferring a small positive strength of association between perceived self-awareness and impersonal reward power; however, there was no significant association for females. Impersonal reward tactics

would include, for example, offering promotions or monetary rewards (Raven et al., 1998).

An analysis of the individual components of the self-awareness measure showed that for women, none of the questions yielded any significance, but for men, every question yielded significance. It is also noteworthy that the question ''accurately describes how others view his capabilities'' yielded the greatest correlation for men, at 0.215 and that in fact this question loaded the greatest on impersonal reward power than across all bases; a suggested explanation is that this is evidence of the prescriptive stereotype of transaction/exchange for men (Vescio et al., 2003), and that when men are perceived to be relationally self-aware and acting within this stereotype, they are attributed greater impersonal reward power in that they are more capable of granting or withholding impersonal rewards.

Kasulis and Spekman (1980) ranked impersonal reward power as eliciting a moderate level of long-run cooperation for compliance as a cognitive outcome of influence.

6.4.3 Legitimacy of equity power and legitimacy of reciprocity power

These two bases correlated with perceived self-awareness with similar moderation and will therefore be discussed together. Neither base yielded a significant correlation with perceived self-awareness of female leaders. For males, Kendall's tau coefficient was 0.175 for the legitimacy of equity power and 0.149 for the legitimacy of reciprocity power, inferring small positive strengths of association with perceived self-awareness.

Table 32 - Extraction of Kendall rank correlation analysis for legitimate equity and legitimate reciprocity power and components of the self-awareness sub-construct

		Q1: Seeks feedback to improve interactions with others		Q2: Accurately describes how others view his or her capabilities		Q3: Knows when it is time to reevaluate his or her position on important issues		Q4: Shows he or she understands how specific actions impact others	
		Females	Males	Females	Males	Females	Males	Females	Males
Legitimacy/ Equity	Correlation Coefficient	0.011	.179**	-0.053	.175**	-0.041	.144**	-0.065	.136**
	Sig. (2-tailed)	0.888	0.000	0.485	0.000	0.588	0.002	0.395	0.004
Legitimacy/ Reciprocity	Correlation Coefficient	-0.028	.135**	-0.063	.170**	-0.032	.133**	-0.073	.099*
	Sig. (2-tailed)	0.715	0.004	0.406	0.000	0.674	0.005	0.335	0.037

As Walumbwa et al. (2008) put forward, leaders who are self-aware demonstrate an understanding of their personal strengths, weaknesses, and a consciousness of one's impact on other people. With this definition in mind, it is not clear why there was a relationship between legitimate equity (where compliance is demanded for compensation for either hard work or sufferance) (Raven et al., 1998), and male self-awareness, nor is it clear why there was a relationship between legitimate reciprocity (which arises from a subordinates obligation to comply as a result of the leader having done something positive for the subordinate) (Raven et al., 1998), and male self-awareness. Since the effect sizes were so small, this did not warrant further investigation.

6.4.4 Coercive power – personal and impersonal

Personal coercion can be conceptualised in terms of a threat of disapproval, whereas impersonal coercion can be conceptualised in terms of a threat of punishment, such as a dismissal (Raven et al., 1998).

Coercion is the lowest order power base probabilistically linked to Kelman's consequences of an influence attempt, resulting only in compliance, and this cooperation being of a short-run nature (Kasulis and Spekman, 1980). In sum, the target adopts the induced behaviour not because he believes in its content, but because it produces a required social effect (Kelman, 1961).

It has been argued that self-awareness results in elevated levels of employee engagement (Banks et al., 2016; Walumbwa et al., 2008); it was not surprising then that the study showed no significant association, for neither males nor females, between perceived self-awareness and personal coercion. Additionally, for impersonal coercion, while there was no significant association for males and self-awareness, for the female sample, Kendall's tau coefficient was -.221 indicating a small negative association between self-awareness and impersonal coercive power.

To recap, personal and impersonal coercion were made distinct by Raven et al. (1998) when it was ascertained that there appeared to be gender, personality and situational differences in the availability and use of these extended bases, for example in that women were reportedly more likely to use the more personal form of coercion and men the impersonal one (Johnson (1976) as cited in Raven et al., 1998).

The observed distributions of the coercion variables were therefore consistent with the expectation that increased self-awareness would diminish the salience of coercive power, and particularly for women.

6.5 Research hypothesis 4 – The influence of perceptions of a leader's self-awareness on the bases of their social power is far greater in the context of soft power than harsh power

The second research hypothesis theorised that there would be a significant positive correlation between perceived self-awareness and attributions of the soft bases of power. The results provide evidence that there was indeed significant positive association, and at a correlation coefficient of 0.340 the effect was medium in strength.

The third research hypothesis theorised that there would be a significant positive correlation between perceived self-awareness and attributions of the harsh bases of power. For the overall sample, the correlation was not statistically significant; however there was significance for the male sample, at a correlation coefficient of 0.126 which, when applying Cohen's standard, was a small in strength effect size.

On this basis it was observed that the influence of perceptions of a leader's self-awareness on the bases of their social power was indeed far greater in the context of soft power than harsh power.

The harsh bases of power have the most de-individualised influence processes, where power is imposed on subordinates by leaders and this interaction is supported by organisational hierarchies and systems. On the other hand, compliance with the soft bases of power derives from a follower's identification with the personal attributes of the leader, where the success of an influence attempt is largely based on a subordinate's subjective acceptance or not of the leader's power (Zhao et al., 2016). Self-awareness is an individualised trait, making it less likely that it will interact with harsh power, where the bases have de-individualised influence processes (Aiello et al., 2013). This contrasts with soft power which is more closely connected with a leader's personal attributes, and it is therefore more probable that self-awareness will interact with soft power attributions.

6.6 Research hypothesis 5 – Gender as a moderator

Self-awareness is an important domain of authentic leadership (Walumbwa et al., 2008), but it has been argued that authenticity is socially constructed, and being construed as authentic depends on the leader's ability to ''do'' authenticity in line with the expectations of the shared social identity within which they lead (Liu et al., 2015).

Gendered socialisation has resulted in a distinct gender gap which emphasises pervasive differences in the way in which men and women are expected to pursue economic interests, communicate, act and lead (Mendelberg and Karpowitz, 2016). Eagly (2005) proposed that a leader's effectiveness is partly attributable to congruence between the leader role and the gender role, where outsider leaders can be illegitimate even if they convey consensual values.

Expert leaders perceive the environment in which they lead and self-monitor, being sensitive to the balance between expressing their true self and the implications that may result (Ilies et al., 2005). Such relationally authentic leaders perceive a true understanding of their personal values in relation to the contextual identity within which they lead (Lord & Hall, 2005).

It follows then that since leadership is socially constructed, it is intrinsically tied to systemic and distinct gender and power dynamics which exert meaningful influence on how a follower expects the leader to act; being self-aware is therefore not gender neutral and being perceived as self-aware is not necessarily congruent with actual self-awareness. Accordingly, since being perceived as self-aware as a woman is not the same as being perceived as self-aware as a man, it follows then that self-awareness cannot impact the bases of social power in the same way for men as for women, and that gender must emerge as a moderator.

46% of employees surveyed were female, and 54% were male. Of these, 28% of respondents reported having a female supervisor, compared to 72% who reported having a male supervisor. The under-representation of women in the sample workforce, as well as the disproportionate representation of women in the sample leadership, is reflective of the industry sampled as having been male dominated. This outcome was satisfactory for the study in that it increased the likelihood that power differentials would be observed.

The second research hypothesis theorised that there would be a significant positive correlation between perceived self-awareness and attributions of the soft bases of power. The results provide evidence that there was indeed an association. When the

data were split and analysed by gender, the observed results showed a difference not only in the number of power bases that were impacted by perceived self-awareness, by gender, but also that the salience of impact did not follow the same rank order, by gender. All five of the soft bases of power were statistically significant for males; however the impact on expert power was not statistically significant for females. In terms of weight of significance, the greatest impact for males was on referent power, yet for females the greatest impact was on informational power. This provides evidence for the gendered construction of relational self-awareness and relational power.

The third research hypothesis theorised that there would be a significant positive correlation between perceived self-awareness and attributions of the harsh bases of power. When the data were split and analysed by gender, the observed results showed that there was a significant correlation for males, but no significance for females on aggregate; however, an analysis of the individual bases revealed a significant negative correlation for women between perceived self-awareness and the power of impersonal coercion. For males, there was no statistical significance with this base; however legitimate position, impersonal reward, legitimate equity and legitimate reciprocity were all significant for men.

Vial et al. (2016) described a power differential as the perception of the degree to which followers expect that their leaders are likely to rely on coercion as a means of eliciting compliance. This study drew inferences from various authors (Banks et al., 2016; Lord and Hall, 2005; Vial et al., 2016; and Walumba et al., 2008) to suggest that increased self-awareness could increase status, thereby reducing power differentials. The results of this study are consistent with this suggestion in that for females, impersonal coercion was negatively correlated with self-awareness, whereas for males, there was no statistically significant impact.

This again provides evidence that the gendered construction of relational self-awareness cannot be ignored in the attributions of relational power.

6.7 Conclusion

This study sought to understand whether and to what extent follower perceptions of leader self-awareness impact the soft bases of social power, as well as the harsh bases of power, and whether this was moderated by gender.

In summary, perceived self-awareness results in increased attributions of social power overall. The soft bases of power derive the most impact on attributions, and the harsh bases are only attributed for male leaders who are perceived to demonstrate self-awareness, and not for female leaders. Gender has emerged as a moderator.

CHAPTER 7: Conclusion

7.1 Principal findings

Women are underrepresented in corporate leadership roles, and in response to their marginalisation, they often assert themselves through overt displays of dominance or authority; regrettably, this is not always appropriate or effective, since it may trigger a self-reinforcing cycle of illegitimacy (Vial et al., 2016).

The research began by exploring the literature on social power, with a specific focus on the taxonomy of soft versus harsh power (Raven et al., 1998), which lent itself appropriately to examining leadership from a follower perspective. Followership focusses on followers' processes of attribution, which are to a large extent dictated by social identity theory; leaders who share a social identity with followers need to act in a way that reflects the values and beliefs of the collective if they seek to exert power and influence (Subasic et al., 2011). However, this performance in line with a given social context must be perceived to be authentic, and a leader must accurately perceive his/her collective identity in order to enact the socially constructed authenticity (Steffens et al, 2016). The research therefore went on to explore the concept of relational authenticity in extant literature at the granular level of perceived self-awareness, given typical gender prescriptions.

Authenticity is construed as being true to oneself, but when understanding authenticity from a leadership perspective, the construction shifts to authenticity in the context of a leader's relations with others (Avolio et al., 2005). 'Knowing oneself' in a collective context interacts with dynamic forces such as gender and organisational culture, which govern how a leader is expected to act in order to achieve relational authenticity (Eagly, 2005). This perceived self-awareness is subjective rather than being based on objective facts.

Leaders who are self-aware are likely to demonstrate authentic leadership, which positively impacts sustained performance (Avolio et al., 2005). Sustained performance is also an outcome of power that is exercised from the soft bases (Kusalis and Spekman, 1980); however, gender is important in understanding power.

True to the followership approach, data were gathered from the perspective of subordinates who were asked to rate their supervisors on a scale which measured perceived self-awareness, as well as social power attributions. The industry sampled

was male-dominated, being the logistics industry, since this was expected to emphasise power differentials for women. A correlation analysis was then performed on the data to understand the relationship between perceptions of a leader's self-awareness, and social power as attributed by followers across the taxonomy of soft and harsh bases, and further across the eleven bases within the taxonomy, with the conjecture that gender would emerge as a moderator of hierarchical differentiation.

The results of this study have indicated that gender does indeed act as a moderating condition of socially constructed power attributions. This is important because interpersonal interactions in organisations are complex, and social power is a fundamental mechanism of leadership (Zhao et al., 2016).

A consequence of the socially constructed gender differences in power is that males and females are likely to resort to differing influencing strategies, be they conscious or subliminal (Carli, 1999); however, effective leaders will acknowledge that it is important to be sensitive to the consequences associated with the use of power (Kasulis and Spekman, 1980), and make efforts to develop competence in exercising the type of power that yields internalisation as a follower cognitive outcome (Kelman, 1961).

7.2 Implications of this research for academia

Understanding how leaders gain access to social power is an area which has been underexplored in existing literature. The effect of gender on authenticity, and particularly self-awareness, has also been under-explored. The aim of this research was to offer a contribution to the existing body of knowledge on social power theory, by showing that the increased embodiment of perceived self-awareness as a sub-construct of authentic leadership has a distinct interplay by gender on the bases of power attributions.

7.3 Implications of this research for management

The findings of this research have a number of important practical implications for leaders and for firms, as understanding the impact of self-awareness on power can assist in positively legitimising the role of leaders, and particularly for women as leaders.

Firstly, organisations could improve the way in which they recruit, orient, and retain employees. Succession plans must target a better gender balance in the talent pipeline, by acknowledging that the developmental experiences that move men through the stages of organisational advancement are different than those for women. Firms' leadership selection and promotion processes also need to consider that individuals with a positive self-concept, and who are emotionally intelligent, are more likely to be self-aware and have a greater inclination towards leading authentically (Ilies et al., 2005) and can then derive the power benefits that this study has demonstrated.

Secondly, this outcome provides a useful means for firms to identify leaders who are lacking in perceived leadership potency. This evidence could be used in the recommendation of further leadership development of said leaders. Leaders should invest time and cognitive resources in developing their self-awareness in order to gain more power, particularly soft power; self-awareness allows for the development of authentic interpersonal relationships (Avolio et al., 2005), and successfully leveraging these relationships results in relational power and long-run influence. Furthermore, cultivating an understanding of what it is that unites people as a collective group will equip leaders to better promote those interests, and in turn engender relational self-awareness and similarly allow leaders to reap the power benefits that this study has advanced as an outcome of increased self-awareness perceptions.

7.4 Limitations of the research

The nature and operationalisation of this study have given rise to a number of potential limitations. For example, this study analysed social power as measured by the IPI; however, social power can be operationalised in a number of different ways and so to strengthen the generalisability of the inferences of this research, future work should explore alternative methods of quantifying what constitutes social power, and how this is impacted by perceived self-awareness.

Similarly, self-awareness was quantified as measured by the ALQ only, and if future studies measured self-awareness on multiple scales, it could make for a more robust measurement.

A specific drawback of the current dataset was that it was contained to a sample of companies within the logistics industry, which is widely held to be a male-dominated domain; this may have limited the generalisability of the results beyond the present analysis.

7.5 Suggestions for future research

Females had a higher mean total power score than males, at 3.1495 compared to 2.9892. This was unexpected given that the industry sampled was male-dominated. Future research should explore female dominated industries, as well as gender-neutral industries, to explore how mean power attributions by gender interact with industry, if at all.

Future work could look at replicating the study but with data collection from both the subordinate and the leader perspectives. The introduction of a supervisor self-rating could allow for comparison between the self-awareness score as perceived by the follower and the self-rated score of the supervisor; a difference between the perceived self-awareness and the self-rated self-awareness could provide evidence for the dimension of relational self-awareness, i.e. that being self-aware is indeed contextual in that either gender or circumstance may require the leader to lead in different ways.

Finally, the study focussed on the self-awareness sub-construct of authentic leadership. Future studies could also look at the other dimensions of authentic leadership, for example the balanced processing dimension, and their impact on power.

7.6 Conclusion

Power plays an omnipresent role in a leader's ability to influence individuals within an organisation (Sturn and Antonakis, 2015); yet understanding how leaders gain access to the sources of interpersonal power is an area which has been underexplored in extant literature. This study demonstrated that increased perceptions of self-awareness had a significant positive impact on follower attributions of social power.

Perceived self-awareness is dependent on the aspects of authenticity that reside between a leader and his/her followers, i.e. how a follower understands and relates to a leader's expression of values, relational transparency and self-awareness; this is still an area that warrants further exploration.

Emotional intelligence, an area where women seem to be more competent than men as a result of descriptive gender stereotyping (Lord and Hall, 2005), is emerging as a predictor of leadership success. An actionable solution for women in addressing underrepresentation in corporate leadership, lies in capitalising on this emotional intelligence in order to understand how to be relationally authentic, starting with

relational self-awareness; the results of this study show that this would result in increased attributions of informational power for women, and that this is the most influential of all eleven bases of the IPI (Kasulis and Spekman, 1980).

REFERENCE LIST

Aiello, A., Pratto, F., & Pierro, A. (2013). Framing social dominance orientation and power in organisational context. *Basic and Applied Social Psychology, 35*, 487-495. doi:10.1080/01973433.2013.823614

Avolio, B., & Gardner, W. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*, 318-338.

Banks, G., McCauley, K., Gardner, W., & Guler, C. (2016). A meta-analytic review of authentic and transformational leadership: A test for redundancy. *The Leadership Quarterly,* doi:10.1016/j.leaqua.2016.02.006

Biro, M. (2016). 5 great ways to hack your leadership style. Retrieved from http://www.forbes.com/sites/meghanbiro/2016/04/22/5-great-ways-to-hack-your-leadership-style/#34a4e18c27d0)

Carli, L. (1999). Gender, interpersonal power, and social influence. *Journal of Social Issues, 55*(1), 81-99.

Chizema, A., Kamuriwo, D., & Shinozawa, Y. (2016). Women on corporate boards around the world: Triggers and barriers. *The Leadership Quarterly, 26*, 1051.

Cohen, J. (1992). Quantitative methods in psychology. *Psychological Bulletin, 112*(1), 155-159.

Cronbach, L. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika, 16*(3), 297-334.

Eagly, A. (2005). Achieving relational authenticity in leadership: Does gender matter? *The Leadership Quarterly*, 16, 459-474. doi:10.1016/j.leaqua.2005.03.007

Edmonson, A., & McManus, S. (2007). Methodological fit in management field research. *Academy of Management Review, 32*(4), 1155-1179.

Elias, S., & Cropanzano, R. (2006). Gender discrimination may be worse than you think: Testing ordinal interactions in power research. *The Journal of General Psychology, 133*(2), 117-130.

Eyuboglu, N., & Atac, O. (1991). Informational power: A means for increased control in channels of distribution. *Psychology and Marketing, 8*(3), 197-213.

Ezzedeen, S.; Budworth, M.; Baker, S. (2015) The glass ceiling and executive careers: Still an issue for pre-career women. *The Journal of Career Development, 42*(5), 355-369.

Fletcher, J. (2004). The paradox of postheroic leadership: An essay on gender, power, and transformational change. *The Leadership Quarterly*, 15, 647-661. doi:10.1016/j.leaqua.2004.07.004

French, J., & Raven, B. (1959). The bases of social power. In D. Cartwright (Ed.), (pg. 150-167) *Institute for Social Research.*

Glass, C., & Cook, A. (2016). Leading at the top: Understanding women's' challenges above the glass ceiling. *The Leadership Quarterly,* (27), 51.

Hollander, E. (1992). Leadership, followership, self, and others. *The Leadership Quarterly, 3*(1), 43-54.

Ilies, R., Morgeson, F., & Nahrgang, J. (2005). Authentic leadership and eudemonic well-being: Understanding leader-follower outcomes. *The Leadership Quarterly*, 16, 373-394. doi:10.1016/j.leaqua.2005.03.002

Jordan, J., Sivanathan, N., & Galinsky, A. (2011). Something to lose and nothing to gain: The role of stress in the interactive effect of power and stability on risk taking. *Administrative Science Quarterly*, 56(4), 530-558. doi:10.1177/0001839212441928

Kasulis, J., & Spekman, R. (1980). A framework for the use of power. *European Journal of Marketing, 14*(4), 180-191. doi:10.1108/EUM0000000004899

Kelman, H. (1961). Processes of opinion change. *Public Opinion Quarterly, 25*(1), 57-78.

Kudisch, J., Poteet, M., Dobbins, G., Rush, M., & Russell, J. (1995). Expert power, referent power, and charisma: Toward the resolution of a theoretical debate. Journal of Business and Psychology, 10(2), 177-195.

Leroy, H., Palanski, M., & Simons, T. (2012). Authentic leadership and behavioral integrity as drivers of follower commitment and performance. *Journal of Business Ethics, 107*, 255. doi:10.1007/s10551-011-1036-1

Liu, H., Cutcher, L., & Grant, D. (2015). Doing authenticity: The gendered construction of authentic leadership. *Gender, Work and Organization*, 22(3), 237-255. doi:10.1111/gwao.12073

Livingston, R., Rosette, A., & Washington, E. (2012). Can an agentic black woman get ahead? The impact of race and interpersonal dominance on perceptions of female leaders. *Psychological Science, 23*(4), 354-358.

Lord, R., & Hall, R. (2005). Identity, deep structure and the development of leadership skill. *The Leadership Quarterly*, 16, 591-615. doi:10.1016/j.leaqua.2005.06.003

Magee, J., & Frasier, C. (2014). Status and power: The principal inputs to influence for public managers. *Public Administration Review,* 307-317.

Magee, J., & Galinsky, A. (2008). Social hierarchy: The self-reinforcing nature of power and status. *The Academy of Management Annals, 2*(1), 351-398. doi:http://doi.org/10.1080/19416520802211628

Mendelberg, T., & Karpowitz, C. (2016). Power, gender, and group discussion. *Advances in Political Psychology*, 37(1), 23-58. doi:10.1111/pops.12320

Noland, M., Moran, T., & Kotschwar, B. (2016). Is gender diversity profitable? Evidence from a global survey. *Unpublished manuscript.*

Oc, B., & Bashshur, M. (2013). Followership, leadership and social influence. *The Leadership Quarterly*, 24, 919-934. doi:10.1016/j.leaqua.2013.10.006

Peterson, R. (1994). A meta-analysis of Cronbach's coefficient alpha. *Journal of Consumer Research*, 21, 381-391. doi:0093-5301/95/2102-0012$2.00

Peyper, L. (2016). White males still occupy top jobs. Retrieved from (http://www.fin24.com/Economy/white-males-still-occupy-top-jobs-20160426).

Pierro, A., Raven, B., Amato, C., & Belanger, J. (2013). Bases of social power, leadership styles, and organisational commitment. *International Journal of Psychology*, 48(6), 1122-1134. doi:10.1080/00207594.2012.733398

Podsakoff, P., Mackenzie, S., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879-903. doi:10.1037/0021-9010.88.5.879

Podsakoff, P., Mackenzie, S., Podsakoff, N., & Lee, J. (2003). The mismeasure of man(agament) and its implications for leadership research. *The Leadership Quarterly, 14*, 615-656. doi:10.1016/j.leaqua.2003.08.002

Raven, B. (2008). The bases of power and the power / interactional model of interpersonal influence. *Analyses of Social Issues and Public Policy, 8*(1), 1-22. doi:10.1111/j.1530-2415.2008.00159.x

Raven, B., Schwarzwald, J., & Koslowsky, M. (1998). Conceptualizing and measuring a power / interaction model of interpersonal influence. *Journal of Applied Social Psychology, 28*(4), 307-332.

Rosette, A., & Tost, L. (2010). Agentic women and communal leadership: How role prescriptions confer advantage to top women leaders. *Journal of Applied Psychology, 95*(2), 221.

Rudman, L., & Glick, P. (1999). Feminised management and backlash toward agentic women: The hidden costs to women of a kinder, gentler image of middle managers. *Journal of Personality and Social Psychology, 77*(5), 1004.

Ruske, K., Kauschke, P., & von der Gracht, H. (2012). *Transportation and logistics 2030.* Price Waterhouse and Coopers International (Ltd)

Saunders, M., & Lewis, P. (2012). *Doing research in business & management*. England: Pearson Education Limited.

Schyns, B., & Bligh, M. (2007). Introduction to the special issue of the romance of leadership - in memory of James R. Meindl. *Applied Psychology: An International Review*, 56(4), 501-504. doi:10.1111/j.1464-0597.2007.00301.x

Steffens, N., Mols, F., Haslam, S., & Okimoto, T. (2016). True to what we stand for: Championing collective interests as a path to authentic leadership. *The Leadership Quarterly, 27*, 726-744. doi:10.1016/j.leaqua.2016.04.004

Sturm, R., & Antonakis, J. (2015). Interpersonal power: A review, critique, and research agenda. *Journal of Management*, 41(1), 136-163. doi:10.1177/0149206314555769

Subasic, E., Reynolds, K., Turner, J., Veenstra, K., Haslam, A. (2011). Leadership, power and the use of surveillance: Implications of shared social identity for leaders' capacity to influence. *The Leadership Quarterly*, 22, 170-181. doi:10.1016/j.leaqua.2010.12.014

Vescio, T., Snyder, M., & Butz, D. (2003). Power in stereotypically masculine domains: A social influence strategy X stereotype match model. *Journal of Personality and Social Psychology, 85*(6), 1062-1078. doi:10.1037/0022-3514.85.6.1062

Vial, A., Napier, J., & Brescoll, V. (2016). A bed of thorns: Female leaders and the self-reinforcing cycle of illegitimacy. *The Leadership Quarterly,* doi:10.1016/j.leaqua.2015.12.004

Vinkenburg, C., van Engen, M., Eagly, A., & Johannesen-Schmidt, M. (2011). An exploration of stereotypical beliefs about leadership styles: Is transformational leadership a route to women's promotion? *The Leadership Quarterly*, 22, 10-21. doi:10.1016/j.leaqua.2010.12.003

Walumbwa, F., Avolio, O., Gardner, W., Wernsing, T., & Peterson, S. (2008). Authentic leadership: Development and validation of a theory-based measure. *Journal of Management, 34*(1), 89. doi:10.1177/0149206307308913

Wegner, T. (2012). *Applied business statistics* (Third ed.) Juta and Company Ltd.

Williams, M., & Tiedens, L. (2015). The subtle suspension of backlash: A meta-analysis of penalties for women's implicit and explicit dominance behaviour. *Psychological Bulletin, 142*(2), 165.

Yee, L., Krivkovich, A., Kutcher, E., Epstein, B., Thomas, R., Finch, A., Konar, E. (2016). *Women in the workplace.* McKinsey & Company.

Zhao, X., Shang, Y., Lin, J., Tan, J., Li, H., & Liu, T. (2016). Leader's relational power: Concept, measurement and validation. *European Management Journal*, 34, 517-529. doi:10.1016/j.emj.2016.02.007

APPENDICES

1. Extract from Interpersonal Power Inventory (''IPI")

Legitimacy/Position

2. After all, he/she was my supervisor.
*20. It was his/her job to tell me how to do my work.
28. My supervisor had the right to request that I do my work in a particular way.
34. As a subordinate, I had an obligation to do as my supervisor said.

Legitimacy/Reciprocity

*7. My supervisor had done some nice things for me in the past and so I did this in return.
12. For past considerations I had received, I felt obliged to comply.
32. My supervisor had previously done some good things that I had requested.
43. My supervisor had let me have my way earlier so I felt obliged to comply now.

Legitimacy/Dependence

*9. It was clear to me that my supervisor really depended on me to do this for him/her.
16. Unless I did so, his/her job would be more difficult.
25. I understood that my supervisor really needed my help on this.
40. I realized that a supervisor needs assistance and cooperation from those working with him/her.

Legitimacy/Equity

11. By doing so, I could make up for some problems I may have caused in the past.
21. Complying helped make up for things I had not done so well previously.
30. I had made some mistakes and therefore felt that I owed this to him/her.
*36. I had not always done what he/she wished, so this time I felt I should.

Source: Raven et al., 1998

2. Extract from Authentic Leadership Questionnaire (''ALQ'')

''Instructions: The following survey items refer to your leadership style, as you perceive it. **Please judge how frequently each statement fits your leadership style using the following scale:**

Not at all	Once in a while	Sometimes	Fairly often	Frequently, if not always
0	1	2	3	4

As a leader I…

14. accurately describe how others view my capabilities 0 1 2 3 4

15. know when it is time to re-evaluate my position on important issues 0 1 2 3 4

16. show I understand how specific actions impact others 0 1 2 3 4''

Source: Walumba et al., 2008

3. Observed values for chi-square test of dependence between self-awareness and level of supervision

Observed values for First Chi-square test:

	Self-awareness - Seeks feedback to improve interactions with others					
SUPERVISOR	A	B	C	D	E	F
1	3	7	6	6	1	1
2	6	11	5	11	9	4
3	13	18	6	16	13	6
4	23	25	16	24	18	15
5	19	38	25	24	9	6

	Self-awareness - Accurately describes how others view his or her capabilities					
SUPERVISOR	A	B	C	D	E	F
1	2	6	9	6	5	1
2	8	10	4	8	7	3
3	17	24	13	19	19	8
4	23	35	16	33	14	17
5	15	24	16	14	5	3

	Self-awareness - Knows when it is time to re-evaluate his or her position on important issues					
SUPERVISOR	A	B	C	D	E	F
1	1	7	5	6	3	1
2	5	9	4	6	5	2
3	20	20	9	12	16	8
4	21	32	24	35	12	18
5	16	31	15	22	14	3

	Self-awareness - Shows he or she understands how specific actions impact others					
SUPERVISOR	A	B	C	D	E	F
1	3	3	7	4	2	1
2	7	5	2	6	1	1
3	14	19	9	13	13	7
4	20	36	15	24	22	17
5	21	35	25	34	12	6

AVERGE	A	B	C	D	E	F
(1-2)	1	7	5	7	2	1
(2-3)	13	6	15	8	9	3
(3-4)	17	12	25	21	22	14
(4-5)	34	33	54	45	17	14

Results for the First Chi-square test

Question 1:

Expected Values

SUPERVISOR	A	B	C	D	E	F	Total
1	4,0	6,2	3,6	5,1	3,1	2,0	24
2	7,7	11,9	6,9	9,7	6,0	3,8	46
3	12,0	18,6	10,9	15,2	9,4	6,0	72
4	20,2	31,2	18,3	25,5	15,8	10,1	121
5	20,2	31,2	18,3	25,5	15,8	10,1	121
Total	64	99	58	81	50	32	384

Chi-Square Test

SUMMARY		Alpha	0,05
Count	*Rows*	*Cols*	*df*
384	5	6	20

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	23,8	0,78	31,4	no	0,1
Max likelihood	24,6	0,2	31,4	no	0,1

Question 2:

Expected Values

SUPERVISOR	A	B	C	D	E	F	Total
1	4,9	7,5	4,4	6,0	3,8	2,4	29
2	6,8	10,3	6,0	8,3	5,2	3,3	40
3	16,9	25,8	15,1	20,8	13,0	8,3	100
4	23,4	35,6	20,8	28,8	18,0	11,5	138
5	13,0	19,9	11,6	16,0	10,0	6,4	77
Total	65	99	58	80	50	32	384

Chi-Square Test

SUMMARY		Alpha	0,05
Count	*Rows*	*Cols*	*df*
384	5	6	20

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	25,72	0,68	31,41	no	0,13

Max likelihood	25,59	0,18	31,41	no	0,13

Question 3:

Expected Values

SUPERVISOR	A	B	C	D	E	F	Total
1	3,8	6,0	3,4	4,9	3,0	1,9	23
2	5,1	8,0	4,6	6,6	4,1	2,6	31
3	14,0	22,0	12,7	18,0	11,1	7,1	85
4	23,4	36,8	21,2	30,1	18,6	11,9	142
5	16,7	26,2	15,1	21,4	13,2	8,5	101
Total	63	99	57	81	50	32	382

Chi-Square Test

SUMMARY		Alpha	0,05
Count	*Rows*	*Cols*	*df*
382	5	6	20

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	24,35	0,75	31,41	no	0,13
Max likelihood	26,04	0,16	31,41	no	0,13

Question 4:

Expected Values

SUPERVISOR	A	B	C	D	E	F	Total
1	3,4	5,1	3,0	4,2	2,6	1,7	20
2	3,7	5,6	3,3	4,6	2,9	1,8	22
3	12,7	19,1	11,3	15,8	9,8	6,3	75
4	22,7	34,2	20,2	28,3	17,4	11,2	134
5	22,5	33,9	20,1	28,1	17,3	11,1	133

Chi-Square Test

SUMMARY		Alpha	0,05
Count	*Rows*	*Cols*	*df*
384	5	6	20

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*

Total	65	98	58	81	50	32	384	Pearson's	27,52	0,59	31,41	no	0,13
								Max likelihood	26,37	0,15	31,41	no	0,13

Average:

Expected Values

AVERGE	A	B	C	D	E	F	Total
(1-2)	3,9	5,9	3,5	4,8	3,0	1,9	23
(2-3)	9,1	13,9	8,1	11,4	7,0	4,5	54
(3-4)	18,7	28,5	16,7	23,4	14,4	9,2	111
(4-5)	33,3	50,7	29,7	41,4	25,6	16,4	197
Total	65	99	58	81	50	32	385

Chi-Square Test

SUMMARY			Alpha	0,05
Count	*Rows*	*Cols*	*df*	
385	4	6	15	

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	24,740	0,420	24,996	no	0,146
Max likelihood	24,502	0,057	24,996	no	0,146

4. Observed values for chi-square test of dependence between self-awareness and age of respondent

	Self-awareness - Seeks feedback to improve interactions with others					
age	18-20	21-29	30-39	40-49	50-59	60 or older
1	0	5	9	7	3	0
2	0	8	17	10	10	1
3	0	16	33	11	8	4
4	0	25	45	33	13	5
5	0	32	37	29	21	2

	Self-awareness - Accurately describes how others view his or her capabilities					
age	18-20	21-29	30-39	40-49	50-59	60 or older
1	0	6	9	7	7	0
2	0	10	18	5	7	0
3	0	19	36	25	15	5
4	0	32	54	31	15	5
5	0	19	24	22	10	2

	Self-awareness - Knows when it is time to re-evaluate his or her position on important issues					
age	18-20	21-29	30-39	40-49	50-59	60 or older
1	0	7	6	6	4	0
2	0	6	13	6	5	1
3	1	21	35	12	12	5
4	0	30	52	40	16	4
5	0	22	35	25	17	2

	Self-awareness - Shows he or she understands how specific actions impact others					
age	18-20	21-29	30-39	40-49	50-59	60 or older
1	0	5	7	6	2	0
2	0	7	8	3	4	0
3	1	15	31	13	12	3
4	0	30	48	37	15	4
5	0	29	47	31	21	5

AVERGE	18-20	21-29	30-39	40-49	50-59	60 or older
(1-2)	0	5	7	7	4	0
(2-3)	0	13	23	6	11	1
(3-4)	1	23	45	26	11	5
(4-5)	0	45	66	51	29	6

Results for Second Chi-test

Question 1:

Expected Values

age	21-29	30-39	40-49	50-59	60 or older	Total
1	5,4	8,8	5,6	3,4	0,8	24
2	10,3	16,9	10,8	6,6	1,4	46
3	16,1	26,4	16,9	10,3	2,3	72
4	27,1	44,4	28,4	17,3	3,8	121
5	27,1	44,4	28,4	17,3	3,8	121
Total	86	141	90	55	12	384

Chi-Square Test

SUMMARY		Alpha		0,05
Count	*Rows*	*Cols*	*df*	
384	5	5	16	

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	15,36	0,93	26,30	no	0,10

Questions 2:

Expected Values

age	21-29	30-39	40-49	50-59	60 or older	Total
1	6,51	10,68	6,81	4,09	0,91	29
2	8,98	14,73	9,40	5,64	1,25	40
3	22,45	36,81	23,50	14,10	3,13	100
4	30,76	50,44	32,19	19,32	4,29	137
5	17,29	28,35	18,09	10,86	2,41	77
Total	86	141	90	54	12	383

Chi-Square Test

SUMMARY		Alpha		0,05
Count	*Rows*	*Cols*	*df*	
383	5	5	16	

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	12,83	0,98	26,30	no	0,09

Question 3:

Expected Values

age	18-20	21-29	30-39	40-49	50-59	60 or older	Total
1	0,06	5,16	8,47	5,34	3,24	0,72	23
2	0,08	6,96	11,41	7,20	4,37	0,97	31
3	0,22	19,31	31,66	19,98	12,13	2,69	86
4	0,37	31,89	52,28	33,00	20,02	4,45	142
5	0,26	22,68	37,18	23,47	14,24	3,16	101
Total	1	86	141	89	54	12	383

Chi-Square Test

SUMMARY	Alpha	0,05	
Count	*Rows*	*Cols*	*df*
383	5	6	20

CHI-SQUARE					
	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	15,78	0,73	31,41	no	0,10

Question 4

Expected Values

age	18-20	21-29	30-39	40-49	50-59	60 or older	Total
1	0,05	4,48	7,34	4,69	2,81	0,63	20
2	0,06	4,93	8,08	5,16	3,09	0,69	22
3	0,20	16,80	27,54	17,58	10,55	2,34	75
4	0,35	30,01	49,20	31,41	18,84	4,19	134
5	0,35	29,79	48,84	31,17	18,70	4,16	133
Total	1	86	141	90	54	12	384

Chi-Square Test

SUMMARY	Alpha	0,05	
Count	*Rows*	*Cols*	*df*
384	*5*	*6*	*20*

CHI-SQUARE					
	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	*12,72*	*1,00*	*31,41*	*no*	*0,09*

Average:

Expected Values

AVERGE	18-20	21-29	30-39	40-49	50-59	60 or older	Total
(1-2)	3,88	5,91	3,46	4,84	2,99	1,91	23
(2-3)	9,12	13,89	8,14	11,36	7,01	4,49	54
(3-4)	18,74	28,54	16,72	23,35	14,42	9,23	111
(4-5)	33,26	50,66	29,68	41,45	25,58	16,37	197
Total	65	99	58	81	50	32	385

Chi-Square Test

SUMMARY		Alpha	0,05
Count	*Rows*	*Cols*	*df*
385	4	6	15

CHI-SQUARE

	chi-sq	*p-value*	*x-crit*	*sig*	*Cramer V*
Pearson's	24,740	0,054	24,996	no	0,146