MANAGEMENT STYLES ADOPTED BY WOMEN IN CONSTRUCTION MANAGEMENT – A COMPARATIVE ANALYSIS

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ABSTRACT

The research investigates the management styles adopted by women in the male dominated construction industry and compares them with the contrasting female dominated nursing industry. A standardised survey instrument was used to differentiate six different management styles and the findings are consistent with the proposition that an interactional influence exists between women and the type of organisational environment they work within. The main style adopted by women in the construction industry (authoritative style) was found to be more associated with masculine traits than feminine traits. Even so, their secondary style of management (democratic style) was found to be more associated with feminine traits. Managers in the nursing industry were found to be purely associated with feminine traits (democratic and coaching styles). From the study, more is known about how the work environment influences women leadership styles and there is potential to target leadership roles for women according to their natural style.

Keywords: Women, gender, construction management
INTRODUCTION

Leadership is an important factor in most businesses and it is normally realised via senior management roles in organisations. In the construction industry, management is not spread evenly across both genders - women are significantly under-represented. The objective of this study is to learn more about the management style that women adopt in the construction industry and whether or not their natural style is significantly influenced by the work culture they are exposed to. For instance, authors such as Gilbert and Walker (2001), and Greed (2000), have recognised that female management styles place greater emphasis on teamwork, consensus, relationship, empathy and negotiation skills which offer more humane forms of management. Even so, it is unclear if such attributes are nurtured or challenged by the construction work culture. As a result, this study investigates the leadership style of women managers in the male and production oriented construction industry in Australia, and how this compares with the female dominated nursing industry, being an industry that more directly corresponds with the natural attributes of women. In undertaking the study, it is relevant to point out that no leadership style has proven optimal for all work environments, but rather it is the best style for the situation that counts (Giritli & Topcu Oraz, 2003; Mullins, 1999; Vecchio, 2002).

GENDER AND THE STEREOTYPICAL ROLES OF MASCULINITY AND FEMININITY

The physiology and psychology of gender are related but different things. In physiological terms we are men or women by virtue of our features at birth. Meanwhile, our sense of masculinity or femininity is not only influenced by our physiology but our psychological uptake of these roles as influenced by the societies we live in. For instance, the roles imposed on us by society are our gender roles and these have certain expectations which affect the decisions we make in our day-to-day lives (Feldman 1999). The roles lead to stereotypes which are the expectations one has of a certain group of people. It is important to remember that gender stereotypes are artificial generalisations and that they will not always apply to all members of that gender (Cornelius 1998).
Delving further into this issue, Eagerly (1987) suggested that in terms of gender there are two different types of qualities that are prominent: communal and agentic qualities. The agentic aspect of behaviour is characterised by assertive, goal oriented and controlling tendencies, and include qualities such as aggressiveness, ambition, dominance, independence, self-reliance, self-sufficiency, correctness, and decisiveness (Eagerly 1987). Studies conducted by Werner and La Russa (1985), Rosner (1990), and Gardiner and Tiggerman (1999) have concluded that men are more often than not associated with agentic characteristics. The male development of agentic qualities may result in a tendency for males to emphasise certain leadership behaviours and styles more so than others (Gibson 1995). In the *Gentle Revolution*, Cornelius (1998) suggests that masculine behaviour uses power in order to attain different status when compared with colleagues. When interacting with others, the masculine approach tends to be highly competitive and attention is always directed at the final objective or outcome.

Femininity on the other hand is circumscribed by the nature-nurture condition, quality of life and relationship-building concerns (Richardson 1999). In the previously mentioned study by Eagly (1987) he found that femininity is attributed to the communal dimension and this represents a concern with the welfare of other people. The qualities that Eagly (1987) connected with the communal dimension included nurturance, ability to devote self to others, eagerness to soothe hurt feelings, helpfulness, sympathy, awareness of the feelings of others, and emotional expressiveness. In addition, studies by Werner and LaRussa (1985), Rosner (1990) and Gardiner and Tiggerman (1999) conclude that in general, females are more often characterised by communal qualities than other qualities. Again, drawing on Cornelius's *Gentle Revolution* (1998), it is said that the feminine stereotype is interacting in a manner which is more concerned with using power to attain equality. In addition, it is widely accepted that females commonly play the main role in the rearing of children and fulfil the role of primary homemaker. It is suggested by Gibson (1995) that the use of communal qualities by females will see them adopt similar characteristics in their approach to leadership styles in the work place.
It is logical to assume that masculine style careers will value qualities such as aggressiveness, correctness and assertiveness, while female style careers will value communal qualities such as affection, ability to devote self to others, eagerness to soothe hurt feelings and helpfulness. The comparison of two such contrasting career paths is the basis of this research. Importantly, this issue is set within the context of how women respond to working within the male dominated construction industry and whether or not this affects the style of management they adopt. In order to create a basis for comparison with a classically opposite, female oriented career path, nursing has been chosen as the basis for comparison. Clearly, it is different in so far as being more aligned with caring for people and improving their health. To some extent, such an approach is validated by various work including Gardiner and Tiggerman (1999) and Davidhizar and Cramer (2000) whose work helps qualify the respective industries as being male and female dominated.

THE MALE DOMINATED CONSTRUCTION WORK CULTURE
The people within an organisation and more specifically gender related factors represent some of the more important factors influencing organisational culture (Dainty et al, 2000; Gale & Cartwright, 1995). Placing this in context, Burke and Litwin (1992) identify how work climate fits into the overall construct of work culture. They identify climate as being “how their local work unit is managed and how effectively they and their day-to-day colleagues worked together on the job. The level of analysis, therefore, is the group, the work unit” (Burke and Litwin, p526-7). In the current research, work climate is particularly important since it is the main aspect of the work environment that managers must respond to, and is subsequently central in defining their managerial style.

Gilmer (1966) defines organisational climate as “those characteristics that distinguish the organisation from other organisations and that influence the behaviour of people in an organisation.” (p57). Moran and Volkwein (1992) provide more detail by their definition which identifies work climate as “a relatively enduring characteristic of an organisation which distinguishes itself from other organisations and embodies members collective perceptions about their organisation with respect to such dimensions as autonomy, trust, cohesiveness, support, recognition, innovation and fairness; produced by member interactions;
serves as a basis for interpreting the situation; reflects on the prevalent norms and attitudes of the organisation's culture; and acts as a source of influence in shaping behaviour" (Moran & Volkwein, 1992, p. 20).

Having established the importance of both gender and work climate on work culture, it is assumed that masculine organisations will be dominated by male work climates and feminine organisations will be dominated by female work climates. For instance, authors such as Kanter (1977) and Gardiner and Tiggemann (1999) state that for an industry to be male dominated, less than 15% of the employees in that industry are expected to be women and 85% men. To place this in further context, the construction industry in Australia only employs women at a rate of 12% (Commonwealth office of the status of women, 2001). In addition to this, Dainty et al (2000b) make the point that less than 2% of women in the construction industry are in management positions. It is therefore logical to conclude that construction is a male dominated industry and subsequently it should hold a masculine culture and masculine work climate. It would also seem logical to conclude that masculine cultures are likely to be dominated by power relationships and are results oriented (Gale & Cartwright 1995). Adding further support to this, many studies have looked at the nature of the construction industry and they all present it as a macho culture where relationships are characterised by argument, conflict, changing work groups, sexism and crisis which are all to a greater or lesser extent associated with masculinity (Chandra, 2001; Fielden et al, 2000; Gale, 1994).

Further to the above, the construction industry has a reputation for working long hours and there is a strong culture within the industry that requires demonstrated commitment to work (Sutherland and Davidson, 1993). As a result, a lack of compliance can adversely impact on promotion prospects and this is disadvantageous to women especially given more classical feminine roles such as being a homemaker and primary child carer (Evetts, 1993; Fielden et al, 2000). Further to this, Richardson (1999) makes the point that leader-managers are expected to be decisive and assertive with stronger emphasis on performance, competition and confrontational solutions. Again, this is not particularly in keeping
with the communal dimension of women and is more consistent with the agentic male stereo-type.

In contrast with the above is the nursing industry. Unlike the construction industry, it has a reverse profile in terms of gender bias. For instance the nursing industry fits the previous statistical proportions of gender as being female dominated as opposed to male dominated (Kanter, 1977). In addition, the culture of traditional health industries is feminine in orientation (Gale & Cartwright, 1995). For instance the emphasis is on empathy and healing sick people. In a feminine industry, leader-managers are expected to be attentive to needs, open to ideas and have a strong emphasis on equality, satisfaction and group achievement (Richardson, 1999). Therefore, the nursing industry offers an interesting basis for comparison with women managers in the construction industry.

**MANAGEMENT STYLES**

Initial concepts in managerial styles involved Maslow’s hierarchy of needs and McGregor’s theory X and theory Y (McGregor, 1960; Robbins, 2001). Tannenbaum and Schmidt (1958) went on to model different leadership styles by showing different degrees of bias along scales of authoritarian leadership versus freedom from leadership i.e. where subordinates have greater freedom to act independently of managerial controls. Work by Blake and Mouton (1964) provided a greater ability to categorise specific styles of management but failed to take into account the situational aspects of leadership such as the climate within the organisation (Still 1972). Subsequently, it was argued by Redin (1970) that one style of management may be better in one industry, while less successful in another. Redin developed a grid with one axis being the extent to which a manager was *task oriented* and the other being *relationship oriented*. Litwin and Stringer (1964) went on to conduct a well known study at the Harvard Business School which measured the effect of organisational climate on managerial styles. More recent work by David McClellan and researchers at McBer and Company used these underpinnings to develop six main styles of management that are currently used for identifying management styles in the work place and are utilised in this study (Goleman, 2000; Kelner et al, 1994; AMAP, [www.msut.edu](http://www.msut.edu)). The six styles are conceptualised as falling under two overarching styles – *transactional and*
transactional. Transactional leaders are said to motivate through extrinsic rewards while transformational leaders are defined as leading by empowering staff (Bass et al, 1996; Yuckl, 1899). Of interest to this study is that transformational styles are said to be commonly associated with female modes of leadership (Giritli & Topcu Oraz 2004).

Transactional styles
1. Coercive: concerned with obtaining immediate compliance from employees. This manager wants employees to do exactly what they are told and maintains tight control.
2. Authoritative: this manager's goal is to provide vision and focused leadership. While the manager holds decision making closely they allow for some employee input.

Transformational styles
3. Affiliative: this manager wants to promote harmony, cooperation, and good feelings among employees. These types of actions accommodate such things as family needs, quickly smoothing employee conflict in promoting social activities within the team.
4. Democratic: this is focused on building group consensus and commitment through group management of the decision making process.
5. Pacesetting: this manager is focused on accomplishing a great deal of top-quality work themselves. Employers are thought capable of achieving their own goals with little supervision and are expected to turn out excellent performance.
6. Coaching: this style is directed towards professional growth employees. This manager focuses on helping employees identify their performance strengths and weaknesses, pinpointing ways to improve on a daily basis, and setting development plans that foster career goals.

Large international consultancy companies - such as the Hays Group – utilise the 6 styles of management, as the basis for helping businesses to assess the styles adopted by their managers (HayGroup, 2008). Their research is based on 3871 executives selected from a database of 20000 executives, and indicates that the
most successful leaders are those who can adapt their style to suit the organisational situation.

Only one targeted paper could be found on the above management styles in the construction management literature, by Giritli & Topcu Oraz (2004). Their study focused on the Turkish construction industry and pointed out that there is likely to be a need for different leadership styles at different stages during a construction project e.g. design management may require a more transformational style, while a concrete pour may require a more transactional style.

Based on their sample of 43 participants (including 27 males and 16 females), they found that most used the authoritative style, although this was more prevalent among males than females. If there is a short coming in the generalisability of the findings, it is that the disciplinary backgrounds of the sample focused on architects (60%) and engineers (40%) and so it is unclear if the same circumstances apply to dedicated construction project managers – at least in the Australian sense of the term.

Given these findings, the current study aims to not only address its previously stated aims (i.e. to investigate the managerial style of women in the Australian construction industry and then compare them with this managers in Nursing) but to also do so in a way that allows comparison with Giritli & Topcu Oraz’s work (2004).

**RESEARCH METHOD**

In responding to this task, it was important to ensure that women from both construction and nursing were from relatively similar levels of management. To this end, female project managers and construction managers were chosen from separate companies within the construction industry (all acting as building contractors), and female nurse unit managers were chosen from the nursing industry. Table 1 shows the specific make up of the sample from each industry.
<table>
<thead>
<tr>
<th>Industry</th>
<th>Level of Management</th>
<th>Number of Respondents</th>
<th>% of total sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction</td>
<td>Construction project managers</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td>Nursing</td>
<td>Nursing manager</td>
<td>25</td>
<td>50</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>50</strong></td>
<td><strong>100</strong></td>
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Table 1: Survey sample details

The research aims were operationalised using the six management styles described earlier in the paper. The styles were identified and scored using a survey measurement instrument known as “The Managerial Styles Questionnaire” adapted from work by David McClelland and utilised by the Hays Group (www.haygroup.com). Of note, the Hays Group have undertaken significant statistical sampling and analysis in order to validate the accuracy of the instrument in measuring and categorising the managerial styles identified earlier in the paper (Hays resources Direct 1994).

The survey instrument was administered according to a predetermined protocol aimed at removing biases and unwanted artefacts from the survey method. A key theme was that respondents were required to concurrently consider two paired statements describing different managerial styles and then tick whichever one best described the way they actually behaved in their daily work environment (as opposed to the way they thought they should ideally act). In total, 36 such scenarios were administered to participants. A full version including details on scoring and analysis methods is available on line (AMAP, www.msu.edu). Each statement is associated with one of the 6 managerial styles defined previously. On completion of the survey instrument, scores are counted to identify the main style adopted by an individual followed by their secondary, tertiary and other styles. For instance, the total score for each style falls between 0 and 12, where higher scores indicate that participants favour one style over others. As a result, it is important to realise that respondents will demonstrate a main style of management but followed by this will be secondary, tertiary and other styles according to the scores assigned to each style. The basic methodology replicates the approach taken in the
previously discussed construction leadership study conducted by Giritli & Topcu Oraz (2003). Descriptive statistics were used to analyse the data and so the findings cannot be generalised to the same extent as more rigorous statistical methods. To some extent, this approach was taken because of the sample size and the desire to collect a larger data set in the future.

ANALYSIS OF THE MANAGEMENT STYLES ADOPTED BY WOMEN IN CONSTRUCTION PROJECT MANAGEMENT

In terms of the main managerial style used by women in the construction industry, Figure 1 shows that the authoritative style was easily dominant with 72% of respondents having this style. A further 24% adopted the affiliative style and a much lower 4% adopted the pacesetting style.

Figure 1

Main Construction Project Management style

While the above represents the proportional profile of the main managerial styles adopted by respondents, it was considered worthwhile to also analyse the secondary style they adopted. For instance, as discussed under the research methodology, the scoring system does not preclude managers from having lesser remnants of other styles of management. On this basis, it is interesting to note that Figure 2 shows the dominant secondary style was the democratic style, by an overwhelming 92%. Very minor components were also made up using the authoritative style (4%) and pacesetting style (4%).
Based on these findings, the main style adopted by most women in the construction industry (authoritative) conforms to a transactional, masculine stereotype. For instance, agentic characteristics such as assertiveness, goal oriented, self reliance, decisiveness and controlling traits are all evident (Eagerly 1987). Even so, it is apparent that a much lower but still significant proportion (28%) conforms to a transformational style, including both affiliative (24%) and democratic variants (4%). Similarly, it is notable that the secondary style of women managers is by far a democratic style (92%). Again, this conforms with a transformational, feminine stereotype (Eagerly 1987, Cornelius 1999).

ANALYSIS OF THE MANAGEMENT STYLES ADOPTED BY WOMEN IN NURSING MANAGEMENT
In terms of the main managerial style used by women in the nursing industry, Figure 3 shows that the democratic style of management made up a strong 60% of the sample followed by the coaching style of management which represented a further 20%. A minor 8% was made up by the pacesetting management style (8%). All represent sub-categories of the transformational style of management and so in these terms, the transformational style represents a strong 88% of the overall
nursing sample. A much lower proportions was made up by the authoritative style (12%) being the only sub-category of the transactional style that was present.

**Figure 3**

<table>
<thead>
<tr>
<th>Main Nursing Management Style</th>
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<tbody>
<tr>
<td>- Affiliative</td>
</tr>
<tr>
<td>- Pacesetting</td>
</tr>
<tr>
<td>- Coercive</td>
</tr>
<tr>
<td>- Democratic</td>
</tr>
<tr>
<td>- Coaching</td>
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</table>

As with construction industry managers, it was again considered worthwhile to analyse the secondary style adopted by women managers in Nursing. Figure 4 shows that the democratic style dominated with 40% of the sample followed by 20% devoted to the Coaching style and a further 20% to the Pacesetting style. Very minor components were made up using the affiliative style (12%) and authoritative style (8%). In terms of major groupings, the above findings mean that 92% of nurse’s secondary styles fall into the transformational style of management and only 8% fall into the transactional style.
Based on these findings, both the main and secondary style adopted by most women in the Nursing industry, conform with the transformational, feminine stereotype (Eagerly, 1987; Cornelius, 1999; Giritli & Topcu Oraz 2004). Consequently, transactional, masculine styles – such as the authoritative style of management - were virtually not existent.

CONCLUSIONS
The study was concerned with the proposition that women managers are biased towards masculine styles of management in the construction industry, whilst women managers in the nursing industry are biased towards more feminine styles of management. The research findings are consistent with this proposition. For instance, the research shows that in construction, women have a bias towards a masculine style of management (i.e. a transactional, authoritative style of management) while in nursing they do not (i.e. they conform to a transformational, mainly democratic style).

Of note, the findings relating to women in construction are broadly consistent with Giritli & Topcu Oraz’s findings (2003) who found the same authoritative style dominated their sample of both men and women in the Turkish construction industry. As mentioned in their study, such results contrast with the assertions of
others that women are more likely to adopt a democratic style while men will adopt a more autocratic style (Eagly and Johnson, 1990; Eagly et al, 1992). There is now more support for the proposition that both men and women involved in construction are likely to adopt the same authoritative style as their main style of management.

Even though the authoritative style dominated in construction, the secondary style was predominantly a transformational, democratic style of management – a finding that is again similar to Giritli & Topcu Oraz’s findings (2003). Of note, this varied from Nursing managers who had the secondary style as their main style of management. Because of this and the broader association in the literature between women and democratic styles on management (Eagly and Johnson, 1990; Eagly et al, 1992), it is suggested that women in construction tend to adapt or suppress their natural style to meet the needs and culture of the construction industry. As such, they change to suit the environment, rather than making the environment change to suit them.

Given that women in construction predominantly have an authoritative style and a democratic secondary style, it is relevant to reiterate Giritli & Topcu Oraz’s point (2003) that this profile contrasts with other research which asserts that these contrasting styles of management should not normally co-exist (Vroom & Yetton, 1973; Hersey and Blanchard, 1982). This study provides evidence to the contrary and reflects the adaptability of women relative to the work culture and environment of the construction industry.

This study is an introductory step in a potentially larger scale research into women’s managerial styles in construction. The next step needs to increase the data set to derive more statistically comprehensive findings, and should also segment construction projects into different stages of management to provide better indicators as to where women’s natural style best fits in e.g. design management, cost management, construction management, project management. Another line of study would be to see if similar results were obtained in construction industries where female numbers are less of a minority. This would help isolate whether it is the work environment or the work culture which most influences the managerial styles women adopt.
From an educational perspective, the above research agenda could help women at the end of their tertiary studies to make more informed decisions about the career paths available to them. At an industry level, this same information could be directed towards better utilising the natural managerial styles of women.
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A comprehensive review process of the conference papers was carried out using a panel of referees (technical committee) who were experts in the field. Initially, abstracts were invited and double blind reviewed by two referees resulting in acceptance, acceptance with modifications or rejection. The full papers were then invited and double blind refereed by two referees drawn from the panel. Papers were accepted, accepted with modifications or rejected. In the case of disagreement, a third referee was asked to review the full paper. Finally, when the revised full papers were finally submitted, they were checked to ensure that the referees’ comments had been considered and adopted.
This USB contains the papers presented at the AUBEA 2009 Conference, hosted by the School of Natural and Built Environments, University of South Australia held at the Novotel, Barossa Valley, South Australia, 7-10th July 2009.

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