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There is still little research on the relationship between leadership and the office environment. One of the first studies examines how the office environment influences employees' perception of management

Christina Bodin Danielsson

office design • management

The impact of office design on the view of management

Office buildings are used to demonstrate economic strength and belief in the future, but also to express corporate culture. The use of architecture for branding is based on the idea that architecture helps people recognize the organization and position it in their minds (Hatch & Schultz, 1997).

Recently, an interest in using office architecture as a tool for internal branding has emerged, due to its potential influence on employees' behaviour (Appel-Meulenbroek et al. 2010).

However, despite this, we have not seen any interest in office design from a leadership perspective. Therefore, I and two colleagues Cornelia Wulff and Hugo Westerlund, set out to investigate if the office type the employee works in has any influence on their perception of the closest manager and their relationship to the manager.

The results of the study: "Is perception of leadership influenced by office environment?" (2013) are presented here.

Leadership

Leadership can be defined as a process whereby an individual influences others to achieve a common goal (Bryman, 2004). To motivate members to perform at high level is a primary task of a leader (Kozlowski & Klein, 2000). That leadership is related to performance (e.g. Lok & Crawford, 2004; Rosete & Ciarrochi, 2005; Ugboro & Obeng, 2000) is established. But it is also related to employees' job satisfaction and motivation (Locke & Henne, 1986; Lok & Crawford, 2004) as well as health status, stress levels and sickness absence (Nyberg et al., Kivimäki et al., 2003; 2008). It is by virtue of this, combined with its relationship to employees' organizational identification, commitment and turnover (Testa, 2001; Tett & Meyer, 1993) that leadership is recognized as a crucial factor for organizational success.

Historically, leadership research has focused on personality traits associated with successful leadership (Nygren, Bernin, & Theorell, 2005). However, over the past few decades, the focus has shifted towards the relationship between leaders and subordinates, including leadership behaviours and styles, as

this has been found to highly determine managerial success (Hart & Quinn, 1993). As a result, theories about leader-member exchange (LMX) and empowerment have been developed (e.g., Graen & Uhl-Bien, 1995; Spreitzer, 1995).

Office design's influence on employees and organizations

Office architecture's effect on a variety of factors which impact on organizations has been acknowledged in research. It has for example been found that factors important from an organizational perspective such as employee health and well-being (Bodin Danielsson & Bodin, 2008, 2010; de Croon, Sluiter, Kuijer, & Frings-Dresen, 2005), and sickness absence (Baldry, Bain, & Taylor, 1997; Bodin Danielsson et al., 2014) are affected by types of office design.

Also factors more directly related to organizational success such as levels of performance and collaboration (e.g., Becker, 2004; Becker & Steele, 1995; Brill et al., 1984; Heerwagen et al., 2004), and creativity (Dul & Ceylon, 2010; Mitchell McCoy & Evans, 2002) have been found

to be related to architecture. This is explained by the fact that distances and layout play an important role for both interaction and relationships (Conrath, 1973; Estabrook & Sommer, 1972). It has for example been found that daily interactions in an office often do not reach further than on average 18 metres from the employee's workstation (Sailer & Penn, 2009). Who you sit near also determines who you become friends with (Szilagyi & Holland, 1980), which in turn may be related to the fact that tangible support in social networks significantly decreases with distance (Mok & Wellman, 2007).

Being able to hear and see your manager easily from your workstation will also determine how friendly you perceive your supervisor (Crouch & Nimran, 1989). This, combined with the fact that managers rely heavily on face-to-face spontaneous and unplanned meetings (Kotter, 1982) tells us that office design has some impact on leadership. We know however nothing about what role different types of offices play from a leadership perspective.

“...Historically research has focused on personality traits associated with successful leadership but over recent decades the focus has shifted towards the relationship between leaders and subordinates...”

Office design as a strategic management tool

Architecture has, as described above, mainly been used by organizations for external branding because of its strong symbolic value. But due to the recognition of its impact on factors vital for organizational success, interest has grown in utilising it for internal branding. The recent trend to use office design to enhance the identity of the organization for staff is to some extent a result of greater competition within the global workplace market in which organizations have to compete for talented employees (van Meel & Vos, 2001).

The modern workforce is generally more flexible and less loyal to their organizations compared to earlier generations, and find it less difficult to change employer and country if the work and new employer appeals. This awareness of the importance of using the office environment for internal branding is demonstrated by Google's use of its offices to attract and retain its talented workforce.

Google's offices around the world are designed to facilitate work in many different ways, with layouts designed to encourage informal interactions between colleagues. For example, Googleplex, the company's headquarter in Montview, California, is designed like a university campus, with restaurants, barbecue areas, facilities for sports, parties and concerts, and even a nursery for the employees' dogs. Alongside this, employees are also offered high quality food for free at the workplace. With this growing trend to use the office as an internal strategic management tool, as illustrated by Google, the lack of research so far into the impact of office design from a leadership perspective is difficult to understand.

A study on perception of leadership in office types

Recognizing office design is one of the tools leaders can use to create and change the structure within an organization, combined with the fact that leadership plays an important role for employees' welfare as well as performance – factors crucial for organizational success – I and two colleagues set out to investigate the office type's possible influence on employees' perception of their closest manager. The closest manager is of specific interest, since he/she directly affects the subordinates' work situation (e.g. Deluga, 1998; Graen & Uhl-Bien, 1995).

Our aim was to adopt a holistic approach to the subject, since the office environment is characterized by physical, psychosocial and organizational factors, which together create the overall environment. This includes attention to aspects such as privacy, spacious openness, group size, i.e. architectural features of the office, but also attention to functional features such as organization of work, various functional and technical (ICT) needs.

In addition, since environmental factors in the office may

have a mediating influence on each other we thought it was better to study the office as a whole instead of based on individual factors. Our approach was consistent with other office research that has found that employees' office type, defined by its architectural and functional features, influence their environmental satisfaction, health status (including stress levels) and job satisfaction (Bodin Danielsson & Bodin, 2008, 2009, 2010). By using a unifying concept such as office type as the explanatory factor in the statistical analysis, the study would give both: a) a general overview of differences in perceived leadership between different office environments, and most importantly b) be easily applicable for practitioners.

The principal research questions of our explorative study on the office's potential impact on employees' perception of managerial leadership were:

a) Are there any differences in how employees work in different office types?

b) If so, are there any gender differences in perceived managerial leadership between men and women in different office types?

Study design

Sample - Our study was based on a nationally representative study of work environment and health conducted every second year in Sweden called the Swedish Longitudinal

Occupational Survey of Health (SLOSH). We used data from the third (2010) wave of SLOSH from which our analytic sample of 5,358 subjects (46.1% men, 53.9% women) derives (For details about the sample see Bodin Danielsson et al., 2014).

Background factors – satisfaction with managerial leadership, being a major component in job satisfaction, is influenced by both job related factors as well as other background factors. Since our study design did not enable control for all possible factors, adjustment was made in the statistical analysis for the following major background factors: age, sex, job rank and labour market sector (private/public) due to their possible impact on employees' perception of leadership.

Outcome variables – in our study employees' perception of the managerial leadership was measured with three different scales.

The first scale, GLOBE (the Global Leadership and Organizational Behaviour Effectiveness Programme) the participants rated the immediate managers' trait with regard to his/hers: Integrity, Autocratic, Self-interest, Team integration and Inspirational leadership.

In the second scale, a Leadership scale from the Stress Profile; the relationship with the manager was measured using ten questions. These include questions such as: "Gives me the information I need", "I get praise from my manager if I have done something good" and so on.

Finally, two additional questions from a third scale, the Modern Worklife was used to measure the relationship with

“... This awareness of the importance of using the office environment for internal branding is demonstrated by Google's use of its offices to attract and retain its talented workforce...”

the manager: 1) Does your manager show care for you? and 2) Does your manager listen to you and take in what you say? All together the three scales used comprised 26 questions.

Office types – the study investigated employees' perception of managerial leadership in the seven identified office types in contemporary office design (Bodin Danielsson, 2007; Bodin Danielsson & Bodin, 2009). Since there will always exist offices that differ from the seven office types, these should be viewed as both prototypes and 'ideals'. The seven office types are: 1) Cell-office, 2) Shared-room office, 3) Small open plan office, 4) Medium-sized open plan office, 5) Large open plan office, 6) Flex-office, and 7) Combi-office. The office types are defined by both their architectural and functional features, which go hand in hand and are directly related to each other. The architectural features are the physical framework of the office, of which the most dominant feature is the spatial layout of rooms. The functional features, on the other hand, describe how the office is intended to be used - the functional arrangement and organization of work (For definitions of office types see Table 1 in the online documentation via the references list at the end of this feature.).

However, due to the general purpose of the large SLOSH survey, we could only check whether the offices included in the study matched some of the criteria that define the different office types.

Characteristics of the participants in the study

The descriptive analysis of participants in the study showed some interesting characteristics of the sample. We found that the proportion of women was similar across office types, although there was an over-representation of women in general among the participants.

Regarding age distribution, relatively few participants belonged to the younger age group, i.e. than 34 years old. Most participants in all office types were middle-aged, i.e. 35-49 years old. The highest proportion of young employees was found in flex-offices, although most participants in this office type were middle-aged. The highest proportion of older employees was found in cellular offices. The descriptive analysis also showed that men had higher incomes than women, irrespective of which office type they worked in and moreover that the majority of men worked in the private sector, and the majority of the women in the public.

What did the study then say?

According to all three scales in the total sample, the results showed that there was a significant overall association between office type and prevalence of good perceived leadership. This applied to both men and women separately when perception of leadership was measured using two



Google Amsterdam

of the three scales; GLOBE and Modern Worklife. When, in the first analyses, we looked at how employees in different office types rated their closest managers we found differences between office types:

Shared-room office, for employees in cellular offices we found significantly lower odds of good managerial leadership across all three measurement scales. When we looked at men and women separately, the association was statistically significant only among male employees, although the trend was similar among female employees as well.

Medium-sized open plan office, here the employees had higher odds of good managerial leadership than employees in cellular offices expressed by significantly better odds for good leadership when rated under the GLOBE-scale. For the other two scales we found a similar tendency. Looking at the men and women separately, we found no statistical significances.

Flex-office, in this office type we found significantly lower odds of good (i.e. it was poorer) managerial leadership than amongst employees in cell-offices - using the Modern Worklife scale. According to the other two scales there was also tendency for leadership to be less good, though not as significantly lower, while the estimates for men and women were similar.

Large open plan office and combi-office, for these two office types there were no significant differences in the perception of managerial effectiveness, in comparison to the cellular office, our reference category in the analysis.

If we summarize the results of the study, it indicates that the office type per se has a significant impact on employees' perception of managerial leadership. In two of the scales – GLOBE and Modern Worklife – used to measure employees' perception of their immediate supervisors managerial leadership, the statistical significance found in the analysis of the total sample also appeared in the gender separate analyses.

As we looked at the office types individually we found a significantly higher risk of a perception of poor managerial leadership amongst employees working in shared-room offices than among employees in other office types. This higher risk of poor perception of leadership in shared-room offices remained among male employees for all three scales used to measure the

“... According to all three scales in the total sample, the results showed that there was a significant overall association between office type and prevalence of good perceived leadership...”

perception of managerial leadership. Among female employees the significantly poorer leadership rating remained only when we used the Modern Worklife scale to measure the perception of managerial leadership.

Applying a positive perspective to managerial leadership instead, our results showed a significantly higher rating of good leadership amongst employees in medium-sized open plan offices than in other office types when we used the GLOBE scale. For the other two scales we found a tendency to have a better perception of managerial leadership in this office type than others.

How should we then interpret the results?

The study shows clear differences in how employees in differing office types perceive their immediate supervisor. Since these differences remain in the statistical analysis after an adjustment for background factors, which in themselves have an impact on the individual's perception of managerial leadership, our results indicate that office type per se, defined by its architectural and functional features, may play a role for managerial leadership.

Table 2 (see references) presents a graphical illustration which summarizes both the statistical significances and tendencies of the office type's impact on the perception of managerial leadership.

The illustration reveals a pattern of poorer rating of managerial leadership among employees working in shared-room offices, tightly followed by those working in flexi-offices. It also shows that employees working in medium-sized open plan offices are more satisfied with their immediate supervisors than other employees.

Employees in other office types are found in between these three described office types. An additional aim of the study was to investigate the possible gender differences in the perception of leadership within different office types. No clear gender differences were found, with one exception – in small open plan offices. In this office type, men in contrast to women rated the managerial leadership better than in cellular offices, the reference category. Instead women reported poorer managerial leadership in small open plan offices than in cellular offices.

If we allow ourselves to speculate on why differences in perception in managerial leadership differs between employees working in different office types, I and my colleagues believe some explanations can be found in the leadership theory called LMX (leadership-member exchange).

The LMX theory is occupied with the reciprocal relationships between supervisors and subordinates, and explains different organizational outcomes that result. It shows a special interest in the relationships between the supervisor and various members of the group, and how differences in relationships

develop. According to the LMX theory, low quality leader-member exchange is characterized by formal and impersonal interactions, whereas high quality LMX instead involves trust, mutual liking, and respect between leader and member (Graen & Uhl-Bien, 1995).

From the perspective of LMX and social psychology, could the differences we found between employees in different office types be explained by the architectural and functional features that define the seven office types? These features may well, in our opinion, influence the employee's psychological experiences of leadership, but also group mechanisms, which in turn affect the employee's perception of the manager's leadership, and possibly how the actual leadership is carried out.

According to described hypothesis, the features of an office type can either hinder or improve the relationship between managers and co-workers, since the aural and visual presence of the manager depends of the features of the office type.

The same features could, however, also be positive for the employees if there is trust and equal balance between the manager and co-worker, since they also enable personal control and independence for the employee.

To exemplify, in a cell-office the manager is visually less

present to the employees due to the fact that all employees work in private offices. The architectural design of cellular offices force managers and employees to actively seek each other out for one-to-one meetings, otherwise they will meet only in formal meetings or when encountering each other in common areas.

However, according to our results, the non-visual manager in this office type is less of a problem. The reason for this could be that there is a high degree of personal control in cellular offices which has a positive influence on both environmental satisfaction and job satisfaction (e.g. Bodin Danielsson & Bodin, 2008, 2009; Duvall-Early & Benedict, 1992; Lee & Brand, 2010). This compensates for the possible shortcomings of a visually absent leadership. In shared-room office the audio and visual absence of the manager seems to be a problem though.

Why this is the case, we can only speculate. It could be due to the dynamics of groups when two to three members are situated away from their manager. These in turn may encourage the development of sub-cultures, which in turn risk becoming self-sustaining, autonomous and distanced from the management (Sundstrom, 1986).

These characteristics may consequently lead to possible misunderstandings and potential problems with the management and organization. That the manager, when entering the shared-room office is outnumbered by the two to three people working in the room may also lead to a power imbalance. This could have negative effects, both on how the

“... The features of an office can either hinder or improve the relationship between managers and co-workers since the aural and visual presence of the manager depends of the features of the office type...”

employees perceive the leadership and how the manager behaves.

If we look at the positive perception of managerial leadership instead, the good results among employees in medium-sized open plan offices with 10-24 people would, when applying the hypothesis described above, suggest that this office type involves different group dynamics from shared-room offices.

This means that an office type featuring a medium-sized group of employees sharing workspace together with the manager does not foster subcultures, but rather facilitates interaction, spontaneous meetings and reduces status barriers between leaders and subordinates.

This theory is supported by research that has found that physical proximity to be crucial for both communication and friendship to develop between organizational members (Festinger, Schacter, & Back, 1950; Szilagyi & Holland, 1980). Our hypothesis is that the positive perception of managerial leadership is explained by the fact that manager and co-workers often share workspaces in medium-sized open plan office is supported by research that has found that employees with a visibly and audibly present manager perceive their supervisors as more friendly (Crouch & Nimran, 1989).

If our hypothesis regarding the poor perception of leadership in shared-room office is correct, a successful strategy to counteract the development of barriers between managers and employees in this office type could be to actively work on forging one-to-one interaction between employee and manager. It may also require having joint meetings with group members who share space in the manager's room and by applying an office design that encourages meetings in common areas.

Regarding gender differences, the described study found no clear differences between how men and women perceive their immediate managers in the different office types. This being said, some differences found are worth mentioning. One such difference is the poorer perception of leadership found among male than female employees working in shared-room offices. This could possibly be due to a higher risk of sub-cultures to develop among men than women, an explanation which finds some support in that men are more involved in workplace conflicts than women (Swedish Work Environment Authority, 2012).

The indications there may be more likelihood of better perception amongst men in small open plan offices than women is not evident however. Perhaps women are more sensitive than men to the social control that more easily develops in the small open plan office due to its group size than in the other two traditional open plan offices – medium-sized and large open plan office.

Summary

The presented study indicates that there are aspects in the seven office types that influence employees' perception

“...A successful strategy to counteract the development of barriers between managers and employees in shared offices could be to actively forge one-to-one interactions...”

of the immediate manager and possibly the managerial leadership per se. If so, the result could be due to employees' personal experiences and group dynamics, but also to the fact that the actual leadership style is influenced by the choice of office type.

This means then that specific leadership styles are more or less successful in the different office types. For example might a more extreme or demanding office type encourage a more “extreme” leadership style. On the other hand, may certain organizational cultures attract or retain certain types of leaders and employees, in other words create a selection effect that may be intentional by organizations?

Based on the results of this study we can however not be sure if any of the explanations I here present hold true, they are only speculations. The fact is that both perception and exercise of managerial leadership depends on many different factors. In addition to this, leadership operates at both the individual and group level, as well as the organizational level. The presented study was a first, initial attempt to examine the relationship between office type and managerial leadership. We now need further studies on the relationship between environmental factors and leadership in offices – both leadership styles and perception of managerial leadership, that consider leadership's importance for both the welfare of employees and the success and survival of organizations. **W&P**

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References

A comprehensive list of all the references for this article including tables and data are available at <http://workplaceinsight.net/workplace/workplace-resources/>

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