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Influence from the top: senior managers and safety leadership

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Abstract

Interest in the safety leadership skills of supervisors and managers does not seem to have been extended to senior managers, who have been described as a ‘neglected species’ in safety research. There are a few studies emerging from other sectors but very little from the energy sector. The Energy Institute has recently sponsored a new research project on senior managers’ safety leadership in the oil and gas industry. This paper presents early findings from this project based on a literature review of both scientific studies and major accident inquiries and addresses the following questions: Does safety need to be managed in a different way to other aspects of the business, such as productivity? Is there a particular leadership style for senior managers (e.g. transformational) that influences the level of safety in their organizations? Are there particular characteristics of senior managers who achieve good safety performance in their organizations?

Introduction

There has been a long-standing interest in the role of top-level managers, as senior leaders, in relation to many aspects of organizational effectiveness. This can be seen at both the practitioner level^[1] and in the academic literature^[2-3] Indeed, a number of authors have suggested that there is something unique about the nature of top-level leadership and that there are qualitative differences in leadership at different levels of an organization^[2, 4-6]. Also, there is a momentum towards increasing corporate social responsibility and ethical business operations following recent revelations of irregular business practices (e.g. Enron). This has forced organizations to consider their operations within the context of their wider environment and consequently how the leadership of the organization impacts on the company’s culture and operating practices. However, despite this wide-ranging interest in the role of top-level leadership, it has been estimated that only 2% to 5% of the general literature on leadership has been directed specifically towards top-level leaders^[3]. The picture is bleaker still when the literature on safety leadership is scrutinized.

Organizational Effectiveness vs. Safety Performance

Does safety need to be managed in a different way to other aspects of the business, such as productivity? Is there a meaningful difference? Is it the case that managing production is intuitively about high output and making things happen, whereas managing safety is about low output and preventing things happen? How do you demonstrate that you prevented something that did not happen?

When it comes to the issue of productivity vs. safety, the general assumption appears to be often that high productivity can only come at the cost of safety and conversely, if everything is done “safely” then productivity will suffer. However, a number of studies in the literature demonstrate a counter position. For example, Mattila et al.^[3] found that the characteristics associated with generally effective supervision correspond with those which are necessary for effective safety supervision. Similarly, Salminen and Saari^[8] demonstrated that it is possible to devise measures which increase both productivity and safety. Furthermore, in their review of quality and safety in construction, Loushine et al.^[9] concluded that, overall, the literature supports the use of integrated safety and quality management in industry. The position of safety professionals and safety regulators is reflective of this literature and reinforces the concept of employing safety management systems and integrating these into, or at least ensuring compatibility with, regular management systems within an organization.

Top-level Leaders and organisational effectiveness

Leadership at the top level has been variously referred to as “Senior” leadership^[10-11], “Executive” leadership^[2, 12] and “Strategic” leadership^[13-14]. These terms are essentially interchangeable. A number of leadership theories from across the different conceptual perspectives have been contemplated at this level^[15-18] although there has been some debate about which theories are most suitably applied at the top-level of organizations^[3].

Studies examining the relationship between leadership at the top-level and organisational effectiveness have mostly concentrated on the CEO position across a number of companies rather than the Top Management Team, or senior management of an organisation as a whole. Results have been mixed. For example, Waldman et al.^[17] found CEO charisma to be related to organisational performance in terms of profit margin and equity return. On the other hand, Tosi et al.^[19] found no direct overall relationship between CEO charisma and organisational performance in terms of shareholder or asset return. They did, however, find a relationship under conditions of perceived environmental uncertainty. Agle et al.^[20] also found no relationship between CEO charisma and organisational performance; however, they used a different measure of charisma to the studies mentioned above. Two studies examining senior management have applied the full-range model of transformational and transactional leadership, rather than just the charisma component^[18, 21]. Transactional leader behaviours are those related to monitoring and reward. Transformational leader behaviours, on the other hand, are those directed towards inspiring vision and genuine motivation of the workforce. These studies found transformational leadership to have a strong impact on innovation^[21] and subjective assessment of organisational outcomes^[18]. Taken together these results are far from conclusive, but they indicate a relationship worthy of further investigation.

While there does exist a small body of studies on the influence of top-level managers and their leadership style, in relation to financial performance, productivity and innovation, there have been very few studies in reference to the influence of top-level managers leadership on safety performance. This is somewhat surprising given the increased attention being paid to top-level leadership by safety practitioners and the academic literature on safety^[22] and additionally by Public Enquiries and accident investigations^[23-30]. Table 1 highlights comments regarding senior management and safety performance from a number of these enquiries and investigations.

Table 1 Incident reports and comments regarding senior management

Incident	Comment Regarding Senior Management
Three Mile Island reactor explosion (USA)	“We found serious managerial problems within the organization [NRC]. These problems start at the very top.” (Kemeny 1979)
Clapham Junction rail crash (UK)	“Reliance on lateral management is bound to produce a lack of teeth in getting to grips with problems and getting them sorted out. Large schemes need firm, positive and sufficiently senior control in order that they are carried through properly, which means safely, efficiently and economically.” (Hidden 1989 p.161)
Herald of Free Enterprise sinking (UK)	“But a full investigation into the circumstances of the disaster leads inexorably to the conclusion that the underlying or cardinal faults lay higher up in the company. . . . From top to bottom the body corporate was infected with the disease of sloppiness.” (Sheen, 1987, p. 14)
Kings Cross fire (UK)	“There had been a collective failure from the most senior management level downwards over many years to minimise the outbreak of fire, and more importantly to foresee and to plan for an uncontrolled outbreak of fire at an underground station with a real potential for large-scale loss of life.” (Fennell, 1988, p230)
Piper Alpha fire (UK)	“The quality of safety management by operators is fundamental to offshore safety. No amount of detailed regulations for safety improvements could make up for deficiencies in the way that safety is managed by operators.” (Cullen, 1990, p. 301),
Ladbroke Grove rail crash (UK)	“The impression given by the evidence was that senior management were content to wait till proposals had been put up to them, and failed to give and maintain the lead in seeking solutions and ensuring a response.” (Cullen, 2000 p.3)
BP TexasCity refinery explosion (USA)	“BP has not provided effective leadership on or established appropriate operational expectations regarding process safety performance at its U.S. refineries [and] the panel believes that the lack of effective leadership is systemic, touching all levels of BP’s corporate management having responsibility for BP’s U.S. refineries (Baker, 2007 p.66).

The comments in Table 1 indicate not only that the spotlight is being cast upon the upper echelons where safety is concerned but also suggest a causal relationship between senior managers’ leadership and safety performance. In addition, the new legislation on corporate manslaughter, under UK law, has implications for the scrutiny of top-level people within organizations and the safety performance of those organizations.

Leadership and safety

Top-level managers in the upper echelons of organizations are currently noted as a “neglected species”^[31] with regard to their impact on safety within Safety Critical Organizations and particularly in relation to the impact of their leadership style. However, it is not the case that there is no interest in the influence of leadership style on organisational safety, rather, that most studies have been limited to middle-manager or site-supervisor level. Leadership has in fact been fully implicated in safety, with the majority of studies examining the full-range model of transformational and transactional leadership behaviours^[22, 32-33] in managers and supervisors. This multi-factor model of leadership has been shown to have a positive impact on safety^[22, 32-33]. A few studies have also looked at LMX^[34-36]. However, this theory applies more at the dyadic level and highlights the issue at hand: the focus on middle managers and supervisors leadership, at the expense of the senior level.

While there is evidence that the full-range model of transformational and transactional leadership is good for both productivity and safety, there have been concerns raised about the ethics of transformational leadership in that it could be used by self-serving leaders to deceive and exploit followers – the so-called “dark side” of charismatic leadership: narcissisms, authoritarianism and Machiavellianism^[37-38]. A number of authors have attempted to clarify and refine this position by returning to the roots of the concept of charismatic and transformational leadership^[39-40] and consequently Authentic Leadership is developing as a model to go beyond transformational leadership and has trust as a core component^[41-42]. Interestingly, a number of studies which have looked at transformational and transactional leadership and safety, have identified trust as a key mediating variable in the effect of such leadership on safety^[32, 43-44]. According to Barling et al.^[32], the idealised influence aspect of transformational leadership conveys safety as a core value through the demonstration of personal commitment. This, in turn, facilitates trust which has been suggested to be the “missing piece in the safety puzzle”^[44].

Authentic Leadership

The momentum for the concept of Authentic Leadership comes from the positive psychology movement^[45]. Positive psychology focuses attention on the positive attributes people have that enhance life rather than what is wrong with people, human frailties and weaknesses. In organisational terms, the concept is reminiscent of McGregor’s^[46] Theory X and Theory Y. McGregor put forward these terms to describe two fundamentally different sets of assumptions about why people work. The basic assumption of Theory X is that people are lazy and uninclined to work and the basic assumptions of theory Y are the opposite – people are motivated and seek commitment, responsibility and enjoyment from their work. This move towards positive psychology and rejection of Theory X is exemplified in Luthans’^[47] description of Positive Organisational Behaviour (POB): “the study and application of positively oriented human resource strengths and psychological capacities that can be measured, developed, and effectively managed for performance improvement in today’s workplace.”^[47] p. 59. The core states of POB are Confidence, Hope, Optimism and Resilience. Luthans and Avolio (2003) relate POB to the full-range/multi-factor leadership model and recent developments in moral/ethical leadership to develop the concept of Authentic Leadership.

Authentic Leadership is defined as: “a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviours on the part of leaders and associates, fostering positive self-development.”^[42]p.243. Authentic leaders are characterised as: confident, hopeful, optimistic, resilient, transparent, moral/ethical, future oriented and give priority to developing associates to become leaders^[42]. In their model of the authentic leadership process, Avolio et al.^[48] identify hope, trust, positive emotions and optimism as key intervening variables in leaders’ influence on followers’ attitudes and behaviours. This recognition of the role of trust in leadership revisits notions stated earlier regarding the full-range model of leadership and safety. Given the key role of trust is thought to have in safety, Authentic Leadership appears particularly suited to an examination of the influence of leadership in relation to safety.

Senior leadership and Safety

As stressed earlier, safety management systems have been demonstrated as important in the management of safety performance in the same way that general management systems are important in the management of productivity. Leadership, and particularly that of senior managers within an organisation, is regularly put forward as a fundamental aspect in the success of management systems. However, there are only a handful of papers from the industrial sector which look at top-level managers^[49-56] and not many of these touch on leadership styles per se. The Health Care Sector is emerging as a notable exception, where research investment on the influence of top-level leaders is on the increase^[51].

The majority of the literature looking at top-level managers, focuses on their perceptions of what is important for safety and a number attempt to show how that relates to safety measures. For example, Chew^[50] interviewed CEOs and safety professionals and attempted to examine a number of safety activities, including top management involvement, to ascertain which are most effective in reducing injury rates. One of their conclusions was that “visible, physical participation of top-management in safety may be particularly effective in increasing safety.”^[50] p.116. Two studies have indicated that a positive attitude towards health and safety and accident prevention from top level managers has a positive effect on safety^[53, 56]. This positive attitude is also perceived by senior managers to have a positive effect on productivity^[52]. Interestingly, Findley et al.^[51] found difference in the perceived safety culture of different groups of staff. The majority of managers and support staff

self-reported a strong safety climate while foremen and the general workforce did not report such a strong safety climate. This is a fairly stable finding in the literature and highlights the potential important communication issues in the process of leadership and building a safety climate. One study attempted to examine the motives of senior managers for risk management^[49] and found the primary motives to be regulatory compliance and avoidance of legal liabilities.

The only studies to attempt to look specifically at the influence of senior managers' leadership on safety, albeit in conjunction with other factors, came from Simard and Marchand^[55-56], who examined micro-macro organisational factors influencing compliance with safety rules. These factors included senior management commitment and leadership. Their results demonstrated that the senior management leadership factor did not quite demonstrate a significant level of direct influence, although there was a trend in the right direction. However, senior management commitment, as measured by the level of safety program development, impacted indirectly on safety compliance through its influence on supervisors' participative management.

Conclusions

This paper explores both scientific studies and major accident inquiries to assess the current state of interest and theory regarding the leadership of top-level managers and its impact on safety performance in organisations. The evidence indicates that it is not necessarily the case that safety needs to be managed in a different way to other aspects of the business, such as productivity. There is also evidence that where the leadership style of senior managers' follows the full-range transformational model, there is a corresponding positive influence on the levels of productivity and safety in their organization. Trust has also been suggested to have an important influence on safety performance. This new research project on senior managers' safety leadership in the oil and gas industry- will examine the relationship between full-range leadership of senior managers and safety and productivity performance and attempt to examine whether, in relation to senior managers, the concept of Authentic Leadership can offer more than Transformational leadership where safety is concerned.

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