EXPLORING WORK ENGAGEMENT OF THE FRONTLINE MANUFACTURING SECTOR

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Ethical Declaration

I declare that this thesis is wholly my own work except where I have made explicit reference to the work of others. I have read the DBA guidelines and relevant institutional requirements. I have discussed, agreed, and complied with whatever confidentiality or anonymity terms of reference were deemed appropriate by those participating in the research and dealt appropriately with other ethical matters arising.

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John Breen

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“Accept the fact that we have to treat almost anybody as a volunteer.”

(Peter Drucker, 1967)

Abstract

Work engagement has captured attention in recent decades as a key organisational metric to enhance and sustain employee performance (Wollard and Shuck, 2011). It has also been identified as a critical factor for an organisation's success and competitive advantage (Macey and Schneider, 2008; Rich *et al*., 2010).

Despite the clear advantages of having a highly-engaged workforce, annual global engagement surveys show very little improvement in engagement levels over the past decade (Saks and Gruman, 2014). This issue of low engagement is particularly acute for frontline staff, as Anaza *et al*. (2016) reported that disengagement among frontline roles is alarmingly high due in part to the failure of the service provider to manage the emotional requirements of their position, thus leading to emotional disengagement. This study is focused on engagement levels of frontline operators in a manufacturing organisation as such a staff group can offer a competitive differentiation to organisations (Menguc *et al*., 2016) due to their direct impact on the customer experience (Popli and Rizvi, 2017). For such a group of frontline manufacturing staff, three main drivers of work engagement are proposed – leadership style, followership and autonomy. The focus on leadership style is linked to its ability to influence behaviours of subordinates in work (Sarti, 2014); the focus on followership supports Kelley's (1988) findings on the quality of followers that subordinates may not follow leaders who employ directive approaches to managing a business, and finally, the inclusion of autonomy recognises that a frontline operator must be given a considerable degree of discretion in order to demonstrate high levels of engagement (Harter *et al.*, 2002). The main research question to be addressed is how these three factors influence work engagement levels of frontline operators in a standardised manufacturing operation.

An exploratory case study approach in a manufacturing organisation where the author is employed was chosen to address this question, and the research methods included an initial survey to establish baseline levels of engagement followed by semi-structured interviews with managers, supervisors and frontline staff. This approach answers the need for more interpretive methods when studying who people are and what they do in work (Jenkins and Delbridge, 2013) and the mixture of a survey combined with interviews allow a check on Kim *et al*. (2013)'s claim that subjective data based on personal experiences may be difficult to measure.

Initially, the survey findings suggested that a relatively high percentage of operators believed that they were engaged; however, a deeper investigation through the semi-structured interviews concluded that approximately one third of the cohort (34%) can be considered to be engaged in a manner consistent with Kahn's view of engagement. Most of the remaining operators are viewed as being engaged within boundaries – with group norms frequently cited as a reason for a ceiling on engagement levels. Finally, there were a group of disengaged operators who had high levels of self-awareness; this reinforces May *et al*., (2004) who linked lower levels of self-consciousness with less

availability to engage in work tasks. The interviews also explored the influence of the three key drivers on engagement levels, and variations were noted; for example, those frontline workers who considered themselves to be engaged believed that they were in control of their job, and supervisors were largely adopting a supportive, shared leadership approach. This contrasts with the disengaged operators who feared a negative reaction from co-workers if engaging with management; these workers tended to be managed on a transactional basis by supervisors. In terms of a theoretical contribution, the role of followership emerged, offering a new perspective on work engagement levels; for example, those who are engaged within boundaries fit into the passive / conforming roles outlined by Kelley (2008). Furthermore, it was found that while there are limits to the extent of autonomy in this manufacturing environment, very few viewed this as an impediment to engagement levels.

These findings have implications for a range of stakeholders in the manufacturing organisation (managers, supervisors and frontline operators) which are considered at the end of this study. From a management perspective, this includes embracing a more transformational approach to dealing with frontline staff while recognising that the mature age of the workforce in this organisation would make it difficult to expect big changes to engagement levels due in part to the considerable tenure with the organisation – with many coming towards the end of their careers. For the frontline operators, it highlights the positive aspects of improved engagement levels such as greater ability to work independently and a greater sense of job enrichment while acknowledging that there may be negative aspects if one is seen to be violating group norms. The study concludes with suggestions for future research and an acknowledgement of the research limitations.

Keywords: Work Engagement, Leadership Style, Followership, Autonomy.

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SECTION 1: INTRODUCTION AND RESEARCH OVERVIEW

Introduction

The origins of work engagement can be traced to Kahn (1990: 694) who conceptualised it as the "harnessing of organizational members' selves to their work roles". Literature on this topic has increased considerably since then in both the academic and practitioner fields. This chapter introduces this emerging area as the topic of selection for a DBA study, showing its linkages to related concepts and the importance of having engaged employees in the workplace. The focus of this study will be directed towards frontline staff who tend to display lower engagement levels than other employee categories (Harter *et al*., 2002). The chosen research strategy will be a case study of an organisation where the author is employed. The research aim and objectives are then discussed and this leads to an outline of the proposed contribution of the study before a brief chapter summary.

The Nature and Importance of Work Engagement

This chapter focuses on engagement in the workplace which is a desirable condition for employees as well as for the organisation they work for. Some researches can't even agree on the name for the construct where some argue that it should be called employee engagement (Saks and Gruman, 2014), while others suggest job engagement (Rich *et al*, 2010, or work engagement (Schaufeli and Salanova, 2011). This study will focus on work engagement which can be viewed as the relationship of the employee with his or her work, whereas employee engagement may also include the relationship with the organisation (Schaufeli, 2013). Table 1 below outlines a number of definitions for this concept.

Table 1: Key Definitions of Work Engagement

Source	Concept Description
Kahn (1990)	Employees who harness their full selves through the behavioural investment of physical, cognitive and emotional energy in their work.
Maslach *et al.* (2001)	The opposite or positive antithesis to burnout. Characterised by energy, involvement and efficacy.
Robinson *et al.* (2004)	A positive attitude held by the employee towards the organisation and its values. Employees improve performance within the job with colleagues.
Schaufeli *et al.* (2002)	A positive fulfilling work-related state of mind that is characterized by vigour, dedication and absorption.

Within the field of work engagement, there are two schools of thought; one viewpoint put forward by Maslach and Leiter (2000) is that a continuum exists with burnout and engagement as two opposite poles. This leads to a view that the best way to prevent burnout is to build engagement. However, a second school of thought operationalises engagement in its own right as the positive antithesis of burnout (Schaufeli *et al.*, 2001). In this view, engagement is characterised by energy, involvement, and efficacy—which are direct opposites of the dimensions of burnout (exhaustion and cynicism); this is consistent with Halbesleben (2010, cited in Bakker and Leiter, 2010) who found dimensions of engagement to be negatively associated with dimensions of burnout with few exceptions. When introduced by Kahn in 1990, engagement was uniquely conceptualised as a positive psychological state (May *et al*., 2004; Rothbard, 2001). By emphasising an employees' passion, attention, vigour, energy, absorption and dedication during the performance role, the concept of engagement has focused on the positive strengths of employees in their workplace (Jeung, 2012). Rich *et al*. (2010) extended Kahn's view when noting that when individuals are engaged, they are investing their hands, head, and heart in their performance. This view was further extended by Schaufeli *et al.* (2002) when they decomposed engagement into three components: vigour which is represented by high levels of energy and mental resilience (Mauno *et al*., 2007), dedication which is characterised by a strong psychological involvement and a sense of pride, inspiration, enthusiasm, and absorption which is symbolised by high challenge and skill utilisation (Eisenberger *et al*., 2005). These components have been likened to a person who completely loses track of time due to becoming wrapped up in their tasks (Song Hoon *et al*., 2012), and is linked to the holistic investment of their complete selves in the performance of their work roles (Kahn, 1990).

Schaufeli *et al*. (2002: 74) extended this view of engagement as "a more persistent and pervasive affective cognitive state that is not focused on any particular object, event, individual, or behaviour". Thus, engaged employees have high levels of energy and are enthusiastic about their work and are often fully immersed in their work so that time flies (Bakker & Demerouti, 2008). There is also a social aspect to the engagement concept when employees contribute more than expected through behaviours which involve helping colleagues, courtesy and behaviours of civic virtue sometimes related to what is called 'The good soldier syndrome' (Organ, 1988).

The growing interest in work engagement in recent decades lies in its value for predicting positive performances at work (Sarti, 2014). Engaged employees are more innovative and constantly propose new methods to improve how things are done in their workplace (Sakovska, 2012). This has important implications for organisations who constantly try improving performance levels, as research has suggested that engaged employees are productive (Saks, 2006), interact positively (Chalofsky, 2010), and transfer their engagement levels to their co-workers (Bakker and Xanthopoulou, 2009). Work engagement offers organisations a huge competitive advantage through customer satisfaction, productivity and more importantly, profitability and shareholder returns (Harter *et al*., 2002; Crawford *et al.*, 2010). The practitioner literature also attributes work engagement to increases in productivity, sales and customer satisfaction; for example, Macey and Schneider (2008) report that organisations who can successfully improve engagement levels can significantly increase bottom-line results. However, Schaufeli and Bakker (2011) advise caution with practitioner literature as this is not substantiated through peer-reviewed academic journals.

Distinctiveness of the Work Engagement Concepts

Concern has been expressed in some studies about the distinctiveness of work engagement from similar constructs (Christian *et al*., 2011; Newman and Harrison, 2008; Saks, 2008). Macey and Schneider (2008, :3) argue that the confusion about the meaning of engagement, "can be attributed to the 'bottom-up' manner in which the engagement notion has quickly evolved within the practitioner community". This bottom-up method in business is at odds with the top-down academic approach that requires a clear and unambiguous definition of the term (Schaufeli *et al*., 2002). This is supported by Bakker *et al*. (2008) who found that global consulting firms, such as Towers Watson, Mercer and AON Hewitt have combined existing ideas on engagement with such concepts as organisational citizenship behaviour, commitment and satisfaction as an extra role performance. However, researchers in academic fields view these constructs as different to engagement (May *et al*., 2004; Macey and Schneider, 2008).

To address these concerns, some researchers have attempted to show the uniqueness of engagement by comparing it to other constructs (Saks and Gruman, 2014). Table 2 summarises many of these distinctions between other constructs and work engagement.

Table 2: Distinctiveness of Work Engagement from Similar Constructs

Concept	Concept Description	Comparison to Work Engagement
Job Satisfaction	An attitude about one's job, often perceived as positive or negative. Also, a description of job conditions or job characteristics as opposed to the experience from the work itself (Christian *et al.*, 2011).	Engagement is the description of an individual's experiences resulting from the work itself and signifies activation as opposed to satisfaction (Macey and Schneider, 2008).
Extra-role Behaviour	Sometimes described as going the extra mile, or discretionary effort (Van Dyne *et al*., 1994). Often labelled as social exchange behaviour, as goes beyond what is deemed necessary, but the standard is left unspecified. It implies that workers possess a reservoir of energy that they can draw on if they so choose.	Extra-role Behaviour is an overly limiting view of work engagement as simply suggests doing more of the same, whereas work engagement includes innovative behaviours which includes going beyond the specific frames of reference (Macey and Schneider, 2008).
Organisational Commitment	The emotional attachment to one's job or organisation. The shared values and interests with the work and what it stands for. Belonging and being "part of the family" (Meyer and Allen, 1997).	In contrast, work engagement is related to the work itself and not what the work or organisation stands for (Maslach *et al*., 2001).
Job Involvement	The degree that one's job is central to their identity. The job satisfies an individual need, and this connection will be shared inside and outside of work. It also relates to a person's self-image (Cooper-Hakim and Viswesvaran, 2005).	Work engagement refers more to the work tasks. Job involvement may be considered a facet of engagement rather than equated to engagement (Macey and Schneider, 2008).
Workaholic	Excessively hard workers, reluctant to disengage from work. It often comes at a cost to their sleep and social life. Although it may imply a person enjoying their work, the individual may feel compelled to do so with constant feelings that they 'should' be working (Graves *et al*., 2012).	In contrast to workaholics, engaged workers lack the typical compulsive drive. For them work is fun, not an addiction. Workaholics often experience negative emotions and work-family conflict, whereas engagement is positively related to work-family enrichment (Clark *et al*., 2013).
Job Pride	Emotions related to one's work, a type of social value possibly recognised by others. Depicted as a psychological satisfaction (Grandey, 2000).	Job pride may influence an individual to engage, but in itself is not a factor of the work tasks.

This table summarises a large volume of academic writers who claim that work engagement offers something unique and distinct from other constructs. For example, Christian *et al*. (2011), cited in Saks and Gruman (2014), described how engagement differs from job satisfaction, organisational commitment, and job involvement because it is a higher order motivational construct; they viewed it as a broader holistic investment of the entire self, involving a willingness to dedicate physical, cognitive, and emotional resources to one's job. Bakker (2011:265) also made a clear distinction, stating that "work engagement is different than job satisfaction in that it combines high work pleasure (dedication) with high activation (vigour, absorption) where job satisfaction is typically a more passive form of employee well-being". This view of engaged workers as being in the moment, and being completely attentive, focused and connected on what they are doing and trying to achieve is consistent with Kahn's (1990) definition of work engagement, and this resonated well with the researcher at the outset of this study. Kahn added three psychological conditions necessary to be engaged, namely meaningfulness, safety and availability, and argued that if these conditions existed, then one could be fully engaged in their work role. This definition also accounts for a more complete experience, taking account of multiple dimensions of work (physical, cognitive and emotion).

In summary, while the Schaufeli *et al*. (2002) conceptualisation of engagement can be viewed as being so similar to burnout that it questions its distinctiveness, the Kahn (1990) definition of engagement is more encompassing and "suggests something more distinct and unique as it pertains to placing the complete self in the role" (Saks and Gruman, 2014,:159). Furthermore, Kahn (1990) views engagement as involving a rational choice in which individuals make decisions about the extent to which they will bring their true selves into the performance of the role.

Work Engagement of Frontline Staff

Frontline employees are the direct link between the organisation and the customer; Menguc *et al*, (2016) describe these employees as valuable resources who promote competitive differentiation, where the loss of customers often point to poor customer service. Frontline employee engagement has mostly been researched in the service industry, where Chung and Schneider (2002) found that the success of hospitality and service organisations depend upon the performance of frontline employees. Given this

important role for frontline employees, one would expect to see many studies on their engagement levels (Slatten and Mahmetoglu, 2011); however, Kim *et al*. (2009) found that frontline engagement on performance has been relatively neglected or absent from empirical examination with more focus being placed on the effects on other constructs such as employee satisfaction.

This research study is focused on the engagement of frontline employees and the consensus of many academic and practitioner studies is that engagement levels of this staff cohort are below that of other staff groups. In the practitioner field, annual survey results are routinely carried out by HR consultancy bodies such as Gallup, AON, HayGroup and SHRM – and these surveys break down engagement statistics into classifications such as industry type, sector, occupation, age, gender, and educational level. One of these studies (Gallup, 2012) found that while the overall average work engagement across all employee sectors is thirty percent, employees in frontline positions score the lowest on the scale at twenty-four percent. Managers by contrast scored an average engagement of thirty six percent and this study proposes that this is because the management culture in these organisations tend to put process ahead of people. This finding is supported by Anaza *et al*. (2016) who claim that disengagement among frontline roles is alarmingly high due in part to the failure of the service provider to manage the emotional requirements of their position, thus leading to emotional disengagement. The lower engagement levels of frontline staff can also be linked to Slatten and Mehmetoglu (2011) findings that not enough attention is being placed on providing frontline employees with the firm's strategy, which can lead to lower engagement levels. Furthermore, Gagne and Deci (2005) contrasted the structure of frontline roles with the freedom and independence of other roles which can lead to improved engagement through higher levels of intrinsic job motivation. This has led to studies into job design as a way of counteracting the demands of frontline roles. According to Grant *et al*. (2011), job design has a positive influence on motivation, performance and well-being. It involves resources such as autonomy, skill and variety and greatly improves the working environment, leading to higher engagement levels.

Efforts to improve employee engagement often focus on staff and management groups (Cross *et al*., 2012) as it can be perceived that these groups offer higher potential and development opportunities and are often seen as rising stars or high potentials whose engagement could have a significant impact on profitability.

Cross *et al.* (2012) point out that many organisations only really focus on the top percentage of performers, and thus the vast majority of workers are not motivated to engage and often taken for granted. Willem *et al*. (2010) found that expectations of work engagement is typically more related to managerial and staff positions, and not usually associated with frontline functions. Work Engagement is therefore frequently perceived as transactional for lower groups in the organisation chart, either by the use of disciplinary threats to bring individual performance up to standard, (a technique that Bass (1990) argued was ineffective and in the long run likely to be counterproductive), or the use of rewards to improve performance.

Engagement of Frontline Manufacturing Employees

Manufacturing roles require the support of an array of functions for the frontline operator to perform their job. Relative to the service industry, there is not a direct connection with the actual customer in terms of daily interactions, with the emphasis largely upon the products being manufactured. Manufacturing operations tend to be standardised, utilising repetitive methods that can reproduce components in mass quantities. Frontline manufacturing operators transform raw material to finished products through a series of manufacturing steps (Prashar, 2013). It is these tasks that add value to the product, where value increases as the goods flow through the factory.

The performance of frontline manufacturing employees is extremely important, as in such situations, a high proportion of operational costs are allocated towards direct labour. In such an environment, targets are typically set, and performance levels are measured against these fixed production rates, resulting in rigid production targets for the frontline operator (Tamura, 2006). This is usually an objective target, and simple to measure due to the standardisation and the repetitiveness of the work. While such piece rate transactional style manufacturing systems can be suitable in terms of assessing performance, Pil and MacDuffie (1996) argued that production operators are seriously impacted by organisations that rely on such systems, and the engagement of their staff require significant changes in terms of behaviours and culture.

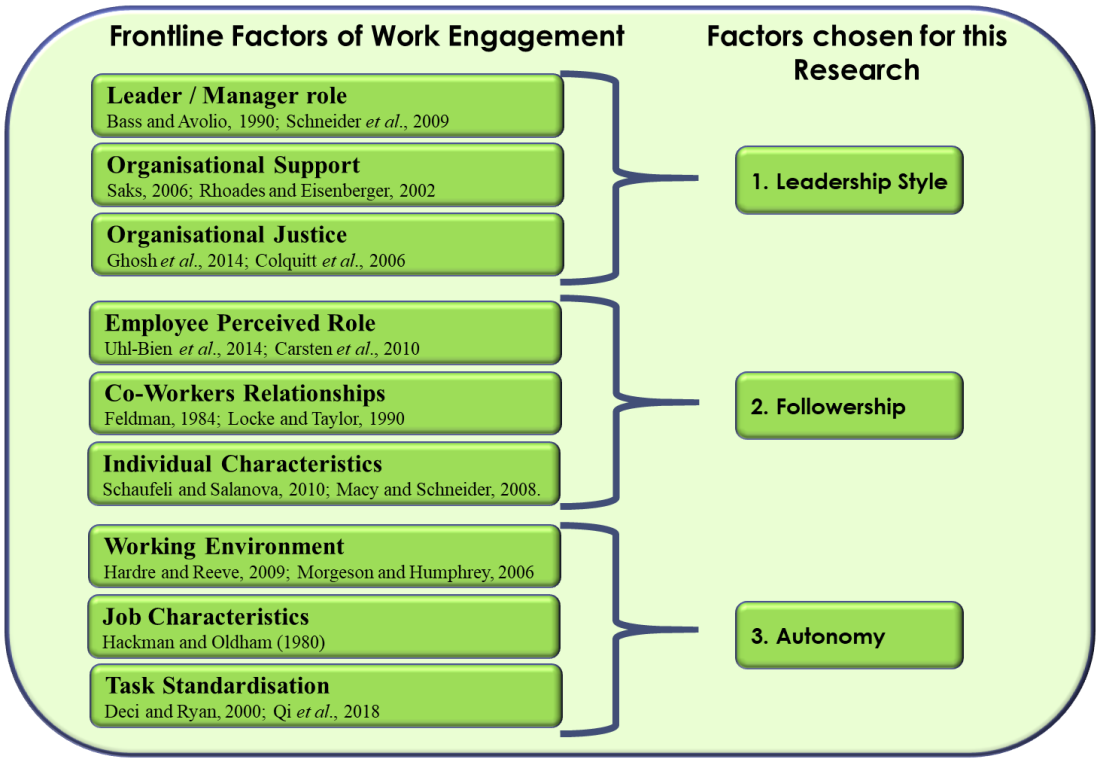
The manufacturing industry has experienced significant change over the past twenty years with lean practices becoming more prevalent with traditional work practices being replaced by team-based approaches where more flexible type manufacturing cells are introduced (Coetzer and Rothmann, 2007). Such practices have contributed to greater

demands, where individuals' psychological experiences in their work is affected, such as work engagement (Nelson and Simmons, 2003). Performance can also be affected by technological constraints, or co-ordination requirements in that individual performance depend on the efforts of their co-workers in the team or on the production line (Guan and Frenkel, 2018). Job design and the characteristics of the role will also have an impact on the job fit, and it is difficult to become engaged when the job does not fit with the employees' abilities and interests.

Drivers of Work Engagement in the Frontline Manufacturing Sector

Despite the importance placed on work engagement, there is lack of consensus over the key factors that impact work engagement the most (Kim *et al*., 2013). Key factors are often referred to as antecedents, precursors or drivers of work engagement. In a literature review of proposed antecedents of employee engagement, Wollard and Shuck (2011) identified over forty factors specified through empirical research or proposed by practitioners. After examining these forty factors of engagement, Rana *et al*. (2014) reduced this down to nine factors that they believed could provide a more comprehensive holistic model of engagement much in line with Kahn's (1990) framework. These nine factors included job design, supervisor and co-worker relationships, workplace environment and HRD practices as the key drivers, with job demands and individual characteristics as moderators. However, while the factors cited in the above studies offer useful insights into work engagement, these factors are appropriate to all frontline roles and are not specific to the manufacturing sector. The researcher was conscious of Rich *et al*. (2010) who suggested that one must understand the job sector and individual role the employee has in the organisation when choosing the key factors associated with work engagement. For this research study into frontline manufacturing operatives, the author has identified nine factors which are shown below in Figure 1.

Figure 1: Key Factors of Frontline Work Engagement



This diagram proposes nine key drivers of the engagement of frontline manufacturing workers with supporting literature for each added underneath. The first of these factors is the role of the leader/manager where it is proposed that engagement occurs naturally when leaders are inspiring (Wallace and Trinka, 2009). Organisational support is closely associated with the psychological safety factor of Kahn's (1990) model. This safety factor stems from the interpersonal relationships throughout the organisation, the supervisors and leadership (Saks, 2006). In fact, Kahn (1992) stated that supportive and trusting relationships made employees feel confident to try new things without the fear of negative consequences. When employees have a high perception of organisational justice, they can feel more obliged to be fair on how they perform themselves (Saks, 2006). This organisational justice factor refers to one's perception of fairness (Ghosh *et al*., 2014). When the decision-making procedures are deemed to be accurate, unbiased and consistent, the employees can be confident that the system is just, even if the outcome is not always favourable (Colquitt *et al*., 2006).

There can be no leadership without followers, and Uhl-Bien *et al*. (2014) suggested that it is important to understand how followers perceive their own role in the leadership process. This is a role-based approach that looks at the extent that followers want to

have a voice into how the work gets done. There are benefits to be gained when followers choose to communicate upward and interact more constructively with people above them (Carsten and Uhl-Bien, 2012). A strong relationship between follower and leader is a key element to effective leadership and organisational outcomes (Graen and Uhl-Bien, 1995). It was found that supportive and trusting interpersonal relationships between co-workers promote employee engagement (Kahn, 1990). Workers who have positive interpersonal interactions with co-workers experience greater meaning in their work, thus good relationships lead to greater work engagement (Locke and Taylor, 1990). Co-worker social support was also a significant component of Bakker *et al.*'s (2008) dedication-vigour-absorption model of work engagement. From an individual perspective, Macey and Schneider (2008) propose that traits such as proactive personality and positive affectivity are important predictors of employee engagement. These are related to Kahn's (1990) factor of psychological availability, in terms of the ability of the employee to have the emotional resources to engage. These individual characteristics can also have a contagious effect, and Schaufeli and Salanova (2010) emphasised that team members feel engaged as they are influenced by the engagement of their peers, and this collective experience or behaviour can spread from one individual to another.

The final three factors related to the manufacturing work environment which initially included such aspects of the job as scheduling work, more decision making in the sequence of the work tasks and choosing one's own methods to do the job. According to Kahn (1990), job characteristics are strongly related to the psychological meaningfulness and a sense of self-satisfaction within the role. This meaningfulness can be achieved from, variety, discretion and the opportunity to contribute. May *et al*. (2004) found that challenging work was positively related to meaningfulness. As meaningfulness was shown to relate to positive attitudinal outcomes (intrinsic motivation), they also suggested that managers should design the job more effectively. Finally, the degree of task standardisation (which involves formalised operating procedures) was also considered an important driver of engagement levels. While one might perceive high levels of job standardisation to be the opposite to autonomy, a recent study of work design and frontline employee engagement by Qi *et al*. (2018) revealed a counterintuitive finding of a positive correlation between standardisation and

autonomy. This is an interesting finding, as the author needed to investigate the nature of job autonomy within a highly rigid and formal manufacturing environment.

There is considerable overlap within the nine factors chosen, and the above diagram indicates that nine key factors have been aggregated into three broad categories and these categories are recognised by the researcher as having the most potential in terms of impacting upon the current levels of work engagement for a frontline manufacturing operator, especially when it comes to the work itself. In choosing three factors, the researcher has assessed the work engagement concept through three separate lenses, viewing the target organisation from the top down (leadership style), the bottom up (followership) and the degree of control the frontline workers have over their own work (autonomy). The researcher believes that this combination offers a holistic and rounded examination of work engagement for frontline manufacturing workers and a justification for the chosen three key factors is now provided.

Leadership Style

The first factor is leadership style and the impact this has on the direct operator. This influence comes from managers and supervisors from all levels of the organisation. The importance of character, ability and behaviour of leaders has been highlighted in many studies especially when influencing positive behaviours of subordinates in work (Sarti, 2014). Despite this, very little attention has been devoted to leadership style as a factor for improving work engagement on the frontline (Saks, 2006).

This research focused on the spectrum of leadership from a very directive approach to the sharing of leadership. The directive or autocratic approach was most common in early manufacturing organisations at the beginning of the twentieth century. This style was very much control and command and little consideration was given to the human aspects, except to make them more productive (Mele, 2013). Leadership relationships changed in the latter half of the century, where managers were less dependent on legitimate power, and more transactional with compensation based upon fulfilling the requirements of the job. There are instances where this type of transactional leadership was viewed as a prescription for mediocrity, intervening only when tasks were not met (Bass and Avolio, 1990). Transformational leadership emerged as a style that promoted a more positive relationship and one that was likely to reflect personal and social identification among followers (Shamir *et al*., 1993). Studies have shown that the

behaviours of transformational leaders are positively correlated with work engagement (Gozukara and Simsek, 2016).

Followership

Traditionally, leader centric theories are focused on leaders and their behaviours, and as a result, followership theories get much less coverage (Bufalino, 2018). Kelley (2008) purported that leaders are deemed to contribute twenty percent of an organisation's success where followers provide eighty percent. Favara (2009) stated that clear definitions of followership are not readily available, and using material from Chaleff, (1995), Dixon, (2003) and Kelley (2008) established the following definition, and this characterisation fits well with this research on work engagement:

> "Followership is the cognitive capacity and affirmative behavioral volition of the individual to be influenced in order to actively partner and participate in the accomplishment of a shared goal or outcome"

If we take this role-based view of followership, it ties in well with the sharing of leadership. Once followers see their role as partnering with leaders, then productivity can be enhanced (Carsten and Uhl-Bien, 2012). This is important as it refocuses our attention away from the leader's style and behaviour to followers' beliefs and behaviours, and allows them a more active role (Shamir, 2007). This supports Schneider *et al*. (2009) who found that supportive leadership impacts the engagement of followers in the sense of increasing their enthusiasm for work.

Historically the concept of followership often evoked a connotation of inferiority, passivity and a lack of drive and ambition, especially those who work on the frontline where there is a rigid hierarchical organisational system (Bligh, 2011). However as traditional organisational hierarchy dissipates between leaders and followers the role of the follower has become more important, and critical for the success of the modern organisation (Zhu *et al*., 2009). In more recent times, it is recognised that leaders and followers share a common purpose, and it may be argued that certain types of followers can create more favourable situations for leaders. At the other end of the followership spectrum, non-following can occur, where resistant behaviours can negate a leader's attempt to engage the employee and therefore withdraw their support and engage in their work or with the organisation (Tepper *et al*., 2001).

Autonomy

This third factor of autonomy is relevant to explore if stringent manufacturing processes allow the frontline workers express themselves when given the opportunity to do so. Job autonomy is one of the core job characteristics from the Jobs Characteristics Model (JCM) and gives employees the opportunity to try out new and useful combinations of work procedures (Wang and Cheng, 2010). According to Shalley and Gilson (2004), job autonomy provides individuals the ability to go beyond the ordinary and come up with the best solution throughout the process. Autonomy complements both leadership and followership in terms of engagement, as transformational leaders inspire employees to be responsible for their own outcome by allowing greater freedom and independence in the workplace (Bass and Riggio, 2006). Salanova *et al*. (2005) showed a relationship between enhanced employee engagement and job autonomy, especially in terms of job control and training opportunities.

In the context of frontline work engagement, lean production systems have been widely adopted as the preferred production system over traditional methods (Genaidy and Karwowski, 2003). Despite the positive relationship between autonomy and work engagement, there is evidence that indicates autonomy is negatively impacted by these lean production systems, as it drives standardisation with low complexity tasks. However, in more recent times, job autonomy has been extended to include greater aspects of the job (not just job tasks) such as work scheduling, decision making, freedom to choose methods and continuous improvement initiatives (Morgeson and Humphrey, 2006). Autonomy can appear to be very limited in a standardised manufacturing environment where process parameters are fixed, and there is little or no room for the discretion of the employee on how they carry out the work tasks. Although leaders may promote empowering behaviours, allowing self-control, self-regulation and self-management (MacPhee *et al*., 2014), the process itself may impede an autonomous working environment where the frontline operator has complete control over their process. Therefore, the distinction between work and social aspects can become blurred as colleagues work together to accomplish production goals. This factor will explore how much control production operators have in completing their work tasks, and in effect a sense of ownership and a belief that they are completely responsible for the outcome. Autonomy is often linked to intrinsic motivation, which

provides more interest, less pressure and greater trust among co-workers (Deci and Ryan, 1987).

In summary, the researcher is proposing to examine the work engagement of frontline manufacturing workers through a leadership, a followership and an autonomy lens. This recognises that both leaders and followers have an important role to play in organisational success and the inclusion of followership follows Brown's (2003) finding that leaders no longer are the exclusive source of vital information about their companies. Well-informed sub-ordinates will no longer follow blindly those leaders who depend upon over directive approaches to managing the business. However, having the necessary information is not in itself enough to drive higher levels of work engagement; it is also expected that a frontline operator must have adequate control of their own job function to demonstrate high levels of engagement. It is the linkage of autonomy within the job function itself that provides a sense of ownership and according to Harter *et al*. (2002) more psychological meaningfulness which was noted by Kahn (1990) as being antecedents to follower work engagement.

Research Strategy

Previous studies of work engagement have almost been exclusively researched through quantitative techniques such as closed question surveys. Multiple approved scales are used in these survey-based approaches, the most common being the Utrecht Work Engagement Scale (UWES) which uses self-reported figures. These work engagement surveys are easy to administer and are quite beneficial in getting a high-level understanding of the workforce engagement profile (Alfes *et al*., 2010; MacLeod and Clarke, 2009). However, it has been questioned how an annual one-off questionnaire can understand what it means to be engaged, and who and what facilitates this, and why? (Sambrook, 2014). There remains limited qualitative research like Kahn's (1990) work that can help explain the substantia gap through interview based studies.

The main interest of the author is Kahn's work engagement theory which views engagement as being a 'deeply personal state' where people express themselves physically, cognitively and emotionally. In his paper on psychological presence at work, Kahn (1992: 344) identifies a research strategy of getting "at the depth of the relation between the individual and the role". In doing so, people can become more accessible, and the researcher can become more involved in the process, examining

their experiences in more detail. On this basis, the researcher chose to conduct a case study in his own organisation. Insider research offers a different perspective on the organisation, as they are carried out by researchers who have a deep level of understanding in the business, and rather than neglecting this knowledge, researchers should turn familiar situations into objects of study (Riemer, 1977).

The chosen research strategy can be viewed as answering the need for more interpretive approaches when studying who people are and what they do in work (Jenkins and Delbridge, 2013). Such an approach is also consistent with Kim *et al*. (2013)'s claim that subjective data based on personal experiences may be difficult to measure, but the information to be gained from these individual experiences could provide some of the missing evidence. Furthermore, Kahn (1992) elaborated on the ability to link the individual with their work role, suggesting that it is important that the research participants can share their experiences and behaviours during moments of engagement and disengagement.

The strategy for this research will be an exploratory case study of a manufacturing organisation with emphasis on frontline production operators. Within the case study strategy, a mix of research methods will be employed; it will start with a baseline quantitative survey in order to understand current perceived engagement levels in the organisation, but will then employ qualitative semi-structured interviews to facilitate a deeper examination of the factors influencing engagement levels – this will address the "how" and "why" type questions as it is aimed to understand what is occurring below the surface of the quantitative survey type answers (Yin, 2009). Historical evidence was available on the cultural background, and Gummesson (2000) points out that an organisations' history is often only used as superficial background material, instead of viewing it as a bridge to interpret both the present and the future. There are many variables of interest with multiple sources of evidence. To explore the underlying issues that cause a frontline production operator to engage or not, in-depth semi structured interviews will be conducted with a cross section of employees from the organisation. These will be guided interviews and will encourage conversation so that the participants can provide meaning that people attach to their individual experiences in work.

Case Study Organisation

The chosen case study is Honeywell International, an American multinational company that manufactures and supplies a variety of commercial and consumer products, engineering systems and aerospace components from private consumers to major cooperation's and governments. The company consists of four business units with a global workforce of 130,000 employees worldwide. Honeywell is a Fortune 100 company currently ranked in 77th place.

One of these business units is Honeywell Aerospace that manufactures aircraft engines and avionic components. Thirty percent of Honeywell's employees work in the Aerospace sector. Honeywell Aerospace Ireland is located in Waterford and manufactures engine components. These include fan blades and compressor blades for commercial and military engine applications. The site is a medium sized plant with a workforce of eighty employees. Fifty percent of this workforce are employed in direct manufacturing. The frontline workers are a mature group with an average tenure of twenty-one years and an average age of forty-nine years. All frontline employees are members of the Technical, Engineering, and Electrical Union (TEEU).

Honeywell has a strong company ethos on the engagement of their employees, and they advocate engagement programs across all business units as a means to create a powerful company culture. Work Engagement is seen as a key competitive advantage for the organisation, and engagement policies are implemented across all business sectors. Employee engagement is believed to impact all key metrics, and Honeywell emphasise that an engaged workforce has a positive impact on Safety, Quality, Productivity and Cost (Honeywell Share Point - Engagement matters, 2011). Honeywell seeks to promote engagement through taking simple but effective steps, including having pride in one's employer, respect for co-workers and a manager's level of trust and integrity. Several behaviours encourage employees to maximise their engagement levels to their job and company. When discussing these behaviours, senior leaders of the organisation use terms such as enthusiasm, passion and energy, plus the desire to win. These behaviours are promoted company-wide as foundational principles that support diversity and workplace respect.

While work engagement is encouraged in Honeywell through the implementation of positive behaviours in work, there is also several systems, processes and tools in place

to enable managers to successfully fulfill their role by encouraging direct reports to engage more in their job. The 'Managers Guide to Employee Engagement' stipulates that "All supervisors are encouraged to use it in developing their relationships and rapport with their teams in order to create a meaningful and rewarding work experience for employees, who, in turn, will invest their discretionary time, talent and intellect in business performance" (Employee Engagement Share Point). To encourage managers to support the engagement of their employees, a 30-minute guide was sent to all leaders in 2011 explaining why engagement matters for the organisation specifying;

> "You may be surprised to learn that some of the most effective techniques for increasing employee engagement cost little or nothing at all – yet have a lasting impact with far-reaching benefits. Investing in employees in even small ways pays great dividends in the long run" (Tim Mahoney, President and CEO, Honeywell Aerospace).

The Honeywell Employee Engagement guide summed up work engagement as an employee who through commitment to the company and a willingness to work hard and go the extra mile would improve the results and increase operating margins. The engagement guide goes on to correlate employee engagement with work force performance and specifies that highly engaged employees are 20% - 28% more productive then their less engaged co-workers.

Positive Employee Relations (PER) Survey

Prior to this research study being undertaken, the author reviewed existing quantitative surveys used by Honeywell to measure work engagement and related concepts. In this regard, he looked at the main findings from an annual internal survey called the Positive Employee Relations (PER) review. This survey is designed to assess engagement in twenty core areas, and all employees of the organisation participate annually. The PER survey is designed to address common themes such as the clarity of employee expectations, the nature of workplace relations, the meaningfulness of the work and the recognition for contributions made. This survey is coordinated by HR in the organisation, and results for all sites are shared with all Honeywell employees. Table 3 below signifies the results of the PER survey for Honeywell Waterford over the period 2012-2017.

Table 3: Positive Employee Relations (PER) – Waterford Facility

Year	2012	2013	2014	2015	2016	2017
Score	76%	77%	83%	88%	80%	81%

These PER results show high levels of reported engagement with all scores above seventy-five percent which contrasts sharply with results from global employment surveys using UWES scales which scores manufacturing workers at 24 percent. Although different scales are used in the PER compared to the UWES, this big variation in results did prompt a realisation of the inherent bias built into the PER process due to the nature of organisational league tables. This means that staff in various Honeywell plants are aware that it is not good to score negatively on engagement levels, as poor results may have a negative bearing on potential future business. This desire to be seen to have high engagement levels to maximise potential future opportunities is linked to the perception amongst workers that Honeywell sites in the bottom half of "league tables" get a disproportional amount of negative focus and publicity. In general, employees know that is not good to bring the public focus on their site, but in the author's view, this makes the PER survey a very unreliable measure of engagement levels within Honeywell Waterford. Therefore, it was concluded that in assessing baseline engagement levels within the authors' own organisation, a new survey would be needed due to the bias surrounding the PER studies.

Researcher Background

The researcher has worked for Honeywell Aerospace Waterford for the past eight years as Operations Manager and has spent his full career to date working in high volume manufacturing environments. There have been many changes in work practices during this time, with the introduction of "Lean Principles" being one of the more significant approaches taken by leadership over the past fifteen years. Manufacturing tends to be very process and scientific based, and the researcher believes that the employees on the frontline are often overlooked during change management initiatives at the expense of product and process related improvements. These organisations often focus on the tools and techniques, and while this can offer quick wins, it is difficult to sustain over the long term due to there not being enough consideration of the human elements of change management.

The topic of work engagement has always been of interest to the author, and a deeper analysis of this topic was considered in light of the limitations of the existing PER survey approach being used prior to this study. In the author's view, the engagement of frontline workers was lower than that reported in the PER survey, and in addition, the researcher believed that there was much more potential to improve engagement levels of such workers – with consequent benefits for the entire organisation. Although the work gets done by frontline staff, there was a lack of vigour and energy portrayed in manufacturing associated with high levels of work engagement. This is what Kahn (1992) defines as personally engaging behaviours, those that channel personal energies into physical, cognitive and emotional labours. Kahn (1990) also suggested that an engaged individual is one who approaches tasks with a sense of energy and passion, which should translate into higher levels of in-role and extra-role performance (Christian *et al*, 2011). It was in this context that concepts related to an individual improving their performance in a work-related environment had significant importance, as suggested by Leiter and Bakker (2010), the modern organisation require employees who feel energic and dedicated to their jobs. The work engagement concept had a more complete fit in terms of an employee's emotional attachment and sense of identity to their work.

For this reason, he considered a study that would provide an analysis of the underlying reasons for existing engagement levels and would explore the effect of key factors impacting on these engagement levels.

Research Aim and Objectives

The choice of an exploratory case study approach to investigate work engagement of frontline production workers at Honeywell was linked to the overarching research question as follows;

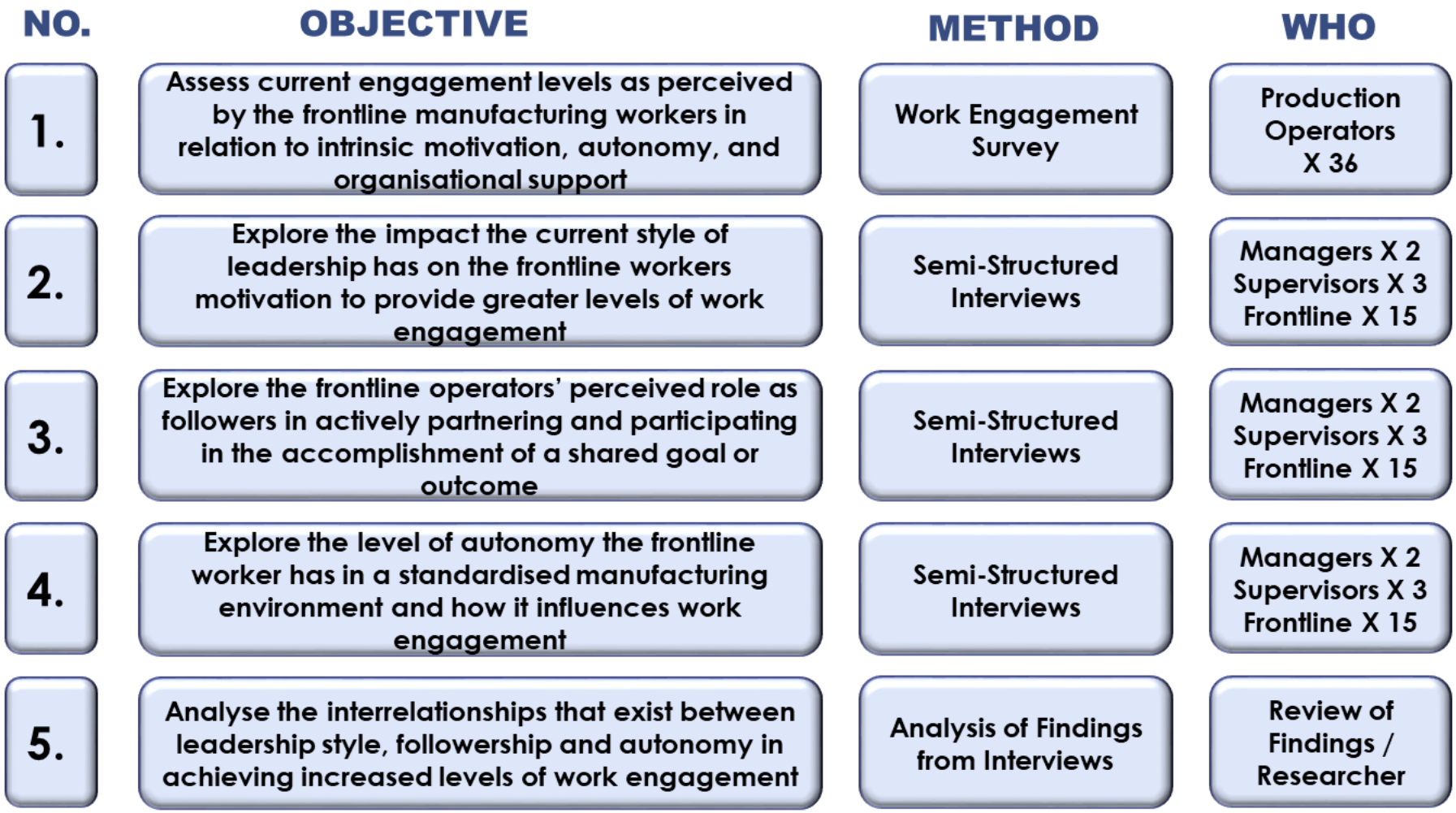
How do key factors (Leadership Style, Followership and Autonomy) influence work engagement levels of frontline production operators in a standardised manufacturing operation?

The focus of this study is on the frontline worker, and the impact of leadership style, their role as a follower and the perceived level of autonomy within the work environment will be explored. A survey will be the starting point in order to get a

baseline engagement profile of the frontline operators using the Utrecht Work Engagement Scale (UWES). This consists of 17 items that measure vigour, dedication and absorption dimensions, although the shorter version of six items will be used for this study as these include items suggested by Kahn that tap participant perceptions of the level of meaningfulness and challenges of the work itself (Rich *et al*., 2010). The main part of the research focuses on the frontline operator themselves, and through semi-structured interviews with operators, supervisors and managers, the researcher will explore the factors that cause operators to engage or disengage in their work tasks. According to Kahn (1990), when personal engagement occurs, views of self and work tasks can be difficult to differentiate and are integrated with each other. There is a personal opportunity to really understand the environment in which these frontline workers carry out their tasks, and although the researcher is an employee of the organisation, is not in a position to really understand what occurs below the surface. According to Shuck *et al*. (2011) this environment is composed of tangible and intangible elements such as relationships with co-workers, supervisors and also group norms and workplace practices that are not part of formal policies and will not surface during normal workplace discussions. The choice of semi-structured interviews will also allow a deeper investigation of the psychological connection with the performance of work tasks (Kahn, 1990) rather than an attitude towards features of the organisation.

This study is planned to take place in a staged manner and Figure 2 below summarises the research stages.

Figure 2: Research Stages



The five chosen research objectives are now briefly discussed.

Assess current engagement levels as perceived by the frontline manufacturing workers in relation to intrinsic motivation, autonomy, and organisational support.

It is perceived by the researcher that work engagement levels in the organisation are low (in line with global statistics); however, the annual Positive Employee Relationship (PER) survey data suggest that frontline employees see themselves as much more engaged. It is accepted that the PER survey is not a validated scale for measuring work engagement as it is biased by the organisational league tables used by Honeywell plants to compare performance. Therefore, a survey was developed to capture factors related to those working in frontline manufacturing positions. The objective of the survey was to focus upon the feelings, values, choices and control one has in their daily work tasks. It relates to both themselves, in terms of their own decision to engage or disengage, and the influential factors coming from the organisation in terms of support and empowerment. One section was devoted to work engagement itself, and six questions from the UWES scale demonstrated by Rich *et al*. (2010) as providing for a more comprehensive explanation between performance and engagement. These six questions targeted energy, pride and enthusiasm. It was viewed that the output from this survey would be an unbiased estimate of current engagement levels for the chosen staff members, and that this would be a more realistic baseline against which to assess the effect of key drivers of engagement.

Explore the impact the current style of leadership has on the frontline workers motivation to provide greater levels of work engagement.

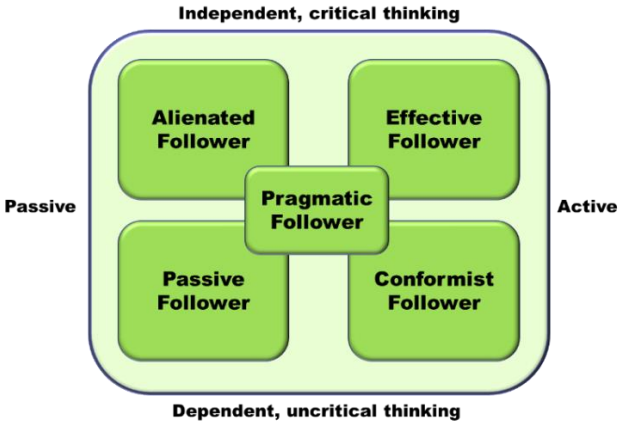
This objective aims to explore the relationship between work engagement and leaders within the organisation. Saks (2006) suggested that although there is a wide interest in the role of leaders, the styles that determined positive behaviours at work was under-researched. While not focusing on any particular style, the scope of the research covers four general approaches including directive, democratic, transactional, and transformational. It will be the fit between the style of leadership and the requirements of the production frontline group that is relevant here. This part of the exploratory study will consider the extent to which leaders allow subordinates input and contribute to the decision making, versus the more directive approach of specifying work procedures and allocating tasks. It does not suggest that any specific leadership style is either negative

or positive but looks at how it influences those in frontline manufacturing positions to engage in their work.

Explore the frontline operators' perceived role as followers in actively partnering and participating in the accomplishment of a shared goal or outcome

Up until recently there has been little research paid to followership within the leadership research (Uhl-Bien *et al.*, 2014). It was suggested by Fairhurst and Uhl-Bien (2012) that this shortfall or oversight is a result of the confusion over the relational interactions between leaders and subordinates and how this process of achievement is "co-created". Similar to leadership styles, the followership spectrum covers a number of different views. Some see their role as a more traditional subordinate, reluctant to speak up, showing behaviours of conformity and reduced responsibility taking, while others are much more dynamic in their behaviour and like to see themselves as partners or even co-leaders. (Chaleff, 1995; Dixon and Westbrook, 2003; Uhl-Bien and Pillai, 2007). Kelley (1992) separated followers into five categories (exemplary, alienated, conformist, passive and pragmatist). This separation was based upon two axes (level of independent thinking and level of participation) as shown in Figure 3 below.

Figure 3: Model of Follower Behaviour



Source: adapted from Kelley (1992) 'The Power of Followership'

Carsten *et al.* (2010) used a different methodology to distinguish followership approaches. Rather than considering how followers view leaders, they looked at how followers viewed their own behaviour and roles when engaging with leaders. They argued that employees develop a multiplicity of meaning along a continuum from passive and obedient at one end, up to proactive at the other end (Bligh, 2011). There

are similarities between both methods to categorise individuals at work and the followership questions in the interview guide sets out to explore how the perceptions of followership impact the frontline operators to engage in their work. Followers can be categorised according to their behaviours. It is the behaviours related to work engagement that is of interest to the author, and it may not automatically be those who are exemplary or proactive that will show high levels of work engagement. For example, according to Favara (2009) conformist followers tend to be actively engaged, but do not have the capacity for independent thinking. It will be through open ended semi-structured interview questions that will seek to clarify each participant's role as a follower and how it influences engagement levels.

Explore the level of autonomy the frontline worker has in a standardised manufacturing environment and how it influences work engagement.

The production of precision components such as those used in aircraft manufacturing follow a highly-controlled process and those who work on the frontline cannot deviate from standardised procedures and instructions. The flow of product is also a repetitive process as the same products are produced daily. The autonomy an employee has, to make choices during their work tasks can either increase or reduce work engagement and this section examined related factors that had an impact on this freedom and choice. Autonomy is mostly researched under the Job Characteristics Model (JCM), but this section seeks to go beyond this and include such aspects as external regulation, and those factors related to the intrinsic nature of one's own work and how this relates to their engagement. Hackman and Oldham (1980) defined autonomy as "the degree to which the job provides substantial freedom, independence and discretion", but more recently Morgeson and Humphrey (2006) extended this autonomy to work scheduling, decision making and work method autonomy. The structure of these questions were designed taking account of the factors relating to a manufacturing environment.

Analyse the interrelationships that exist between leadership style, followership and autonomy in achieving increased levels of work engagement.

During the semi-structured interviews used to examine objectives two, three and four, it is expected that the data obtained will enable an assessment of how each factor (leadership, followership and autonomy) impacts on work engagement for the frontline production operator. For example, in terms of leadership, it is proposed that autocratic

or directive leadership styles will have a negative effect on work engagement, whereas shared styles such as transformational leadership will have a positive effect. The same principle is indicated for the followership scale; it is proposed that operators who show resistant behaviours such as passive or ignoring and withdrawing from their role (Tepper *et al*., 2001) will be less engaged than those who are more active in their role. Finally, in terms of autonomy, it is argued that those who perceive themselves to be heavily regulated will have lower levels of engagement relative to those who perceive themselves to completely autonomous. Controlled or regulated autonomy is pressure based and imposed by forces, and Gagne and Deci (2005) suggested this type of external regulation is associated with poor employee functioning. A mid-point on the autonomy scale can be viewed as amotivation (Hardre and Reeve, 2009) – a term use to specify that an employee is neither intrinsically nor extrinsically motivated but just going through the motions of work and not engaging in work related activities.

While each key factor of engagement will be explored separately, it will be important to understand if these three factors are interrelated. In other words, will a certain leadership style affect how a follower perceives their own role in work, or can a certain amount of autonomy influence an employee's willingness to engage more in their work tasks. For example, Uhl-Bien *et al*. (2014) suggested that transformational leadership can build follower commitment by challenging and inspiring employees to perform. Transformational leaders also place attention on developing followers through understanding their needs and making them more valued (Bass and Riggio, 2006). Deci and Ryan (2000) and Gagne and Deci (2005) place huge importance on Self - Determination Theory (SDT) with specific emphasis on autonomy, suggesting that a central aspect for followership is the absence of close control. Linking this to leadership style, Kovjanic *et al.* (2012) stated that transactional leaders continuously monitor followers' actions and sanction through reward and punishment, as opposed to transformational leaders who acknowledge followers' perspectives and encourage self-initiation.

Conceptual Framework

A conceptual model was developed which illustrates the proposed impact of the three chosen factors on work engagement, and this is shown in Figure 4 below. This model and the scales for the three factors were adapted from key authors researched on

leadership, followership and autonomy which have been discussed in the preceding pages. The basic premise of this framework is that the more we move to the right of the diagram, conditions become more positive for an engaged workforce.

Figure 4: Conceptual Framework - The Engagement Continuum

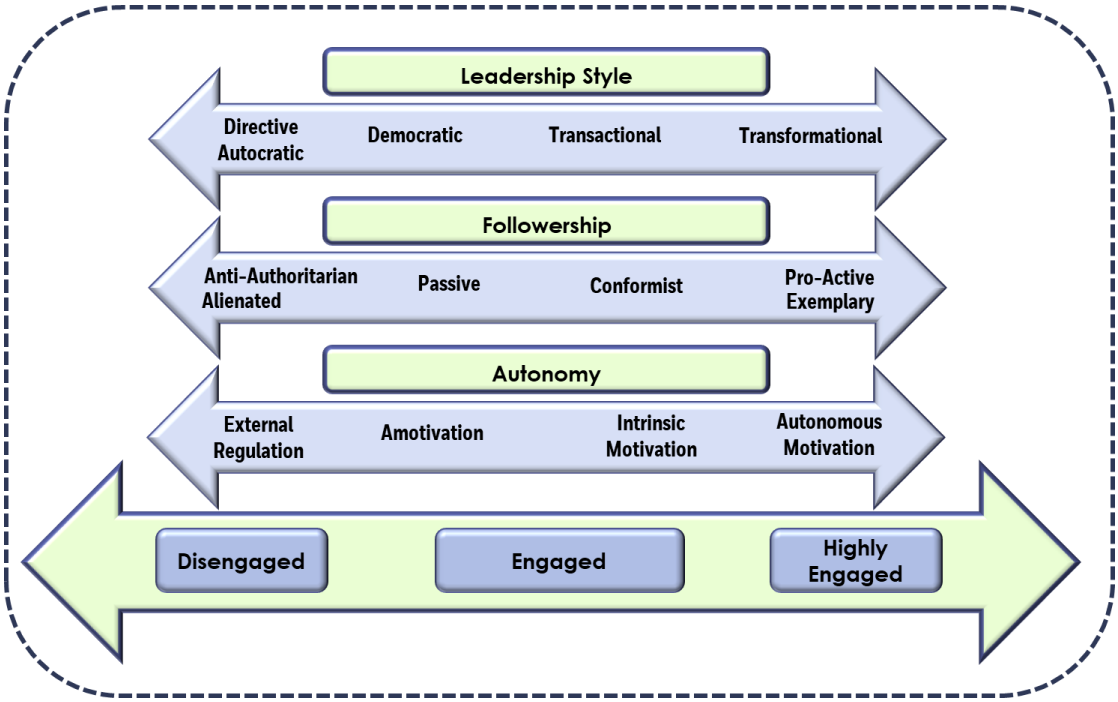


Figure 4 adapted from Bass and Avolio, 1990; Carsten *et al.*, 2010; Kelley, 1992; Deci and Ryan, 2000; Gagne and Deci, 2005; Uhl-Bien *et al*., 2014; Hardre and Reeve, 2009.

It is envisaged that by examining the effect of three factors on engagement levels, it will facilitate an assessment of how one factor may influence the other factors; for example, is it possible to have a highly-engaged workforce if one of these three factors are rated very low by the participants? It will also enable an assessment of whether there is an optimum level for the three factors which can maximise engagement levels of frontline workers.

Proposed Contribution

Work engagement continues to get significant attention in relation to its ability to increase organisational performance across a range of employee groups and has been shown as a stronger predictor of organisational performance than related concepts such as job satisfaction and job commitment (Markos and Sridevi, 2012). This can help explain why organisations such as the chosen case study organisation are spending

more time and resources to measure and improve employee engagement; however, there is a relative lack of qualitative approaches employed when studying who people are and what they do in work. It is hoped that this research will provide both theoretical and practical contributions to the engagement field of frontline manufacturing workers, and these proposed contributions are discussed below.

Contribution to Theory

This study proposes to assess baseline engagement levels through a survey approach and then explores through semi-structured interviews how three key factors (leadership style, followership and autonomy) impact on reported engagement levels. This is summarised in the conceptual model which places all three factors on the one template and the study is contributing to academic research by assessing how these three factors interact in influencing work engagement.

It was stated by Uhl-Bien *et al*. (2014) that there can be no leadership without followers, yet there is very little mention of followers in the engagement research. A key theoretical contribution is thus the emphasis on the role of followers and how they perceive themselves. This role is seen as being more relevant in manufacturing frontline positions where historically these functions were perceived as more directive led and autocratic managed work places. The role of a frontline operator is crucial in respect to the process of followership, as it relates to how the operators allow themselves to be influenced in some way (Uhl-Bien and Pallai, 2007). Therefore, when assessing the willingness to engage, it is important to understand how operators identify their role as followers, and if there is a connection to becoming more or less engaged based upon the belief in the followership process.

From a methodological viewpoint, this study adds a contribution through its largely qualitative approach to allow participants to share experiences during moments of engagement and disengagement (Kahn, 1992). The use of qualitative research methods has the ability to get richer information from the participants, and could uncover deeply held thoughts, opinions and feelings on why a frontline production operator engages or not with their work. Such an interpretative approach is needed when studying who people are and what they do in their work (Jenkins and Delbridge, 2013).

Contribution to Practice

From a practice viewpoint, the proposed study firstly can allow an assessment of how different values of the three factors (leadership style, followership and autonomy) impact on work engagement. If for example, it is found that the engaged employees are those who perceive the leadership style to be transformational compared to the disengaged employees who perceive the leadership style to be transactional, then it may suggest that a move to a transformational leadership style is needed to improve engagement levels. The inclusion of the followership perspective also allows an assessment of how operators allow themselves to be influenced (Uhi-Bien and Pallai, 2007), and this implies that there may not be a single solution to improve work engagement across all frontline employees, and that it may be necessary to tailor the approach for different employees when seeking to improve engagement levels.

The research will be conducted with frontline employees, their supervisors and managers of the chosen case study organisation. A further practical contribution to this research relates to the implications for the various stakeholders. It is expected that the findings from research can lead to improved practices in Honeywell Aerospace Waterford and other Honeywell sites. Learning from this research may also be utilised and adopted across similar manufacturing organisations. It is desired at the end of this research to offer recommendations on approaches to improve levels of engagement, and these recommendations, if successfully implemented, can lead to improved bottom line performance (Macey and Schneider, 2008).

This research will be directed towards frontline employees who from a demographic perspective have a long tenure with the organisation and are a mature group. There is evidence to suggest that engagement is inversely related to tenure (Buckingham, 2001; Robinson *et al.*, 2004), and this study will allow an assessment of how long years of service impacts on frontline engagement levels. The relationship between the long levels of tenure and the culture of an organisation can also be assessed, particularly in the chosen case study organisation where the author believes that there is a strong unionised culture and established group norms may impact on participants' willingness to engage, such as ensuring that operators are reluctant to go beyond what would be deemed the target production rate. The impact of co-worker relationships within this mature environment may offer some unique insights and may be beneficial to similar

organisations that have cultures where standardised production hourly output rates are common. In short, the study has the potential to uncover deeply held cultural beliefs which can provide clarify to managers on the best approaches to take to influence positive behaviours at work.

Work routines and the standardisation of work tasks can impact on the ability for a frontline worker to express themselves in their job. Autonomy can give workers increased freedom and choice on how they carry out their tasks, and therefore a practical contribution is proposed on how a stringent manufacturing process in industries related to aerospace, medical devices and pharmaceuticals impacts on frontline engagement levels. There may also be influences coming from the sense of purpose in the product manufactured, and this purpose may also reveal interesting insights into social work identities that have the potential to increase work engagement levels.

Thesis Structure

The document is presented through four separate sections. Section 1 presents an overview and introduction to the thesis. Section 2 consists of the four cumulative papers. These papers are prefaced with a short linking narrative which explains the research evolution throughout the research. Section 3 presents the discussion and conclusions. Section 4 of this document presents excerpts from the researcher's reflective log capturing the DBA learning journey. Each of these sections are summarised below.

Section 1: The researcher provides the background and justification for the research, presenting the concept of work engagement, its meaning and relationship with other associated concepts. The case study organisation and sector are briefly summarised, taking account of the researcher's background and association with the research and organisation. In particular, the research question and objectives are outlined, and a brief summary of the methodology employed and how this study will build on previous research will be addressed is presented. Organisational context and how this research relates to professional practice is outlined and the proposed contribution to both theory and practice completes this section.

Section 2: As part of the DBA process, the author was required to submit and present four papers in a cumulative paper series. Each paper was presented and assessed by

examiners at predetermined intervals throughout the DBA, and each was ultimately 'recommended' by the examination panel. Changes made are partly because of reflection on feedback received from the paper examiners, the researcher's DBA supervisors and from contributors at the respective doctoral colloquia. These changes also reflected the researcher's continued growth in understanding of both the topic under investigation and the research process itself. Each research paper is summarised below.

- **Paper 1 – Conceptual Paper**: In this first paper, the researcher reviews the literature on work engagement. The definitions, meaning and importance of work engagement get particular focus. Engagement theory is reviewed, and the key factors that influence this concept are discussed. Leadership styles and how they have evolved over the previous century are then examined. Attention is given to the humanistic style of leadership and its potential for influencing positive behaviours in work, especially in the development of work engagement. A rationale is presented on the ability to increase the level of engagement among frontline employees by moving from a traditional leadership style to a more humanistic style of leadership.
- **Paper 2 – Methodology**: This presents the methodological approach chosen by the researcher to undertake the research. It begins by establishing a common thread between work engagement, leadership style, followership and autonomy, revising the conceptual framework. The aim and objectives are clarified. A single case study approach is decided upon, taking into account the ethical considerations and limitations of the study.
- **Paper 3 – Design and Initial Findings**: This paper outlines how the research data will be collected, analysed and reported upon. The initial findings deal with the quantitative work engagement survey and the semi-structured interviews with the managers and supervisors of the organisation. These findings are then summarised in preparation for the final paper.
- **Paper 4 – Findings and Discussion**: This paper completes the findings from the semi-structured interviews with the production operator group. All findings are then analysed for the overall study. The implications for these findings are then discussed.

Section 3: The researcher will present a discussion of the research question and objectives considering the findings and relevant literature. A summary of the key findings, insights, and conclusions from the study will be presented. This section will also include the limitations of the study, recommendations for practitioners, theoretical informed contributions to practice and opportunities for further exploration of the topic of work engagement.

Section 4: This comprises of extracts from the researcher's reflective experience. This synopsis comprises of a selection of excerpts from a Reflective Log maintained by the researcher over a period of five years beginning at DBA commencement in September 2014 to date (December 2019). This selection captures the challenges, triumphs, trials and tribulations of the learning journey.

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SECTION 2: CUMULATIVE PAPER SERIES

Paper 1: Conceptual Paper

Preface to Paper 1

This is the first paper submitted as part of a four-paper series, which forms the basis of this thesis, submitted in December 2019 for consideration of the award of Doctorate in Business Administration (DBA) from Waterford Institute of Technology (WIT). The DBA cumulative paper series comprises of four separate papers, compiled over a three-year period. During this period the research study has gone through several evolutions. Therefore, each paper is an illustration of the researcher's understanding of his study at that moment in time.

Humanistic Leadership versus Traditional Styles

In preparing this paper, the focus was directed towards the impact of leadership styles on work engagement. Attention was given to changes that have taken place over time from traditional approaches on leadership style to more modern techniques such as leader-member exchange (LMX) theory and transformational leadership styles. The humanistic style of leadership resonates strongly with the researcher, and associated methods that motivate frontline production workers to go above and beyond the scope of their work roles. During feedback on the initial submission, it was recommended that although work engagement and leadership styles were explored together, there was the need for further discussion on how the various leadership styles could be addressed from the frontline worker's perspective. At this point, shared leadership approaches were introduced, looking at work engagement through the lens of the frontline worker in a bottom-up analysis. This additional factor gave more opportunity to assess a frontline workers motivation to above and beyond their current work role.

The basic premise then focused on the relationship between the frontline worker and the style of leadership practiced by the organisation. The hypothesis at this stage of the research was to compare the traditional leadership style practiced in manufacturing organisations versus a more humanistic approach. If the organisation adopted a more humanistic style, then the frontline production operator would be more likely to engage in more work activities. At this point the researcher was interested in carrying out this research study in his own organisation through an action orientated methodology.

RESEARCH PAPER SERIES

PAPER 1 - CONCEPTUAL PAPER

"The impact of a humanistic approach for the engagement of the frontline manufacturing sector"

Abstract

Work engagement is a relatively new concept that has gained much popularity in the past 20 years. Although there are many conflicting definitions as to the meaning, there is a general consensus that engaged workers have high levels of energy and identify strongly with their work (Bakker *et al*., 2008). Despite the increased level of interest in work engagement, there has been very little attention devoted to the impact of leadership styles in determining positive behaviours at work (Sarti, 2014).

The dis-engagement of frontline manufacturing workers is much higher than that of other sectors, and they lie bottom of engagement league tables at a massive seventy six percent disengagement (Gallup, 2012). Although there is no clear evidence as to why this sector scores lowest, Gallup (2012) indicate that the traditional leadership style in these organisations tend to put process ahead of people. This study contributes to the literature as there is little research carried out on the frontline manufacturing operator in terms of their motivations to engage in the workplace (Saks and Gruman, 2014).

This paper examines the contributions made to work engagement, especially the key drivers relevant for the frontline manufacturing sector. It explores the evolving style of leadership in industry that impact the motivations for workers to engage. The humanistic leadership approach is considered a style that is more conducive to increasing the level of work engagement. Very few studies have shown the effect of interventions carried out on leadership style as a factor to improve the engagement level in organisations (Harb, 2011), and this study aims to address the shortcomings in the literature. This paper will offer a different perspective on work engagement, looking at it in an action research based approach, working with the frontline operators and supervisors in a participative study.

Introduction

Gruman and Saks (2011) claim that a significant percentage of employees are disengaged, while survey results from Gallup (2012) indicate that seventy percent of American Workers are “not engaged” or “actively disengaged” while Aon Hewitt (2014) find that thirty nine percent of Global Employees are disengaged. Robison (2012) claim that actively disengaged employees aren't just unhappy at work; they're busy acting out their unhappiness. This is significant and may have wider implications for other constructs such as motivation, morale, job satisfaction, and organisational commitment.

There is a general agreement that work engagement is positive for the organisation. However, for an employer to achieve high levels of engagement, they need to understand the concepts involved, and what they need to be doing as an organisation to influence their employees. This paper sets out to firstly define the engagement construct and look at the key seminal theories that have influenced it to date. Four key antecedents of work engagement are reviewed in the context of frontline manufacturing. These are Job Characteristics, Co-Worker Support, Supervisor Support and Organisational Support.

Evolving leadership styles are then analysed throughout the twentieth century, comparing the early traditional styles to that of a more humanistic approach. Drawing from seminal work, this paper will bind theories from work engagement with humanistic leadership styles in an effort to show how we can achieve greater levels of individual commitment from frontline workers when we move from a traditional command and control type to a more human style of leadership.

Defining Work Engagement

There are numerous definitions of engagement in the literature. Some refer to it as *work engagement* (Schaufeli *et al*., 2002) others *job engagement* (Rich *et al*., 2010) while the term *employee engagement* is the most commonly used, especially by practitioners (Towers-Watson, 2012; Aon Hewitt, 2014). This can lead to much ambiguity in developing an agreed definition. It is important however that we capture the key terms used in order for us to understand the scope of this complex construct. Table 4 provides the key definitions of engagement by seminal writers.

Table 4: Definitions, Theory and Context of Work Engagement

Author	Definition	The Theory	The Context
Kahn (1990)	"The harnessing of organisation members' selves in their work roles."	3 Psychological Conditions must exist. Meaningfulness, Safety & Availability. People employ and express themselves physically, cognitively and emotionally.	Two qualitative theory-generating studies carried out on summer camp counsellors (West Indies) and members of an architecture firm (USA). Exploring conditions at work where people either engage of disengage from work.
Maslach *et al*. (2001)	"A persistent, positive affective-motivational state of fulfilment."	The opposite to Burnout. Energy V Exhaustion Involvement V Depersonalisation Achievement V Inefficacy	A review of 25 years of research on the construct of burnout. This theory aims at identifying those aspects that impact engagement, namely workload, control, rewards, community, fairness and values.
Harter *et al*. (2002)	"The individuals' involvement and satisfaction with, as well as enthusiasm for work."	A satisfied state of mind. Difficult to detach themselves from the work.	Using Gallup Workplace Audit (GWA) to examine employee satisfaction / engagement. Study used meta-analysis to examine the relationship at business-unit level of 36 companies (USA).
Schaufeli *et al*. (2002)	"A positive fulfilling, work related state of mind that is characterized by vigour, dedication and absorption."	Feelings of inspiration, pride and enthusiasm for one's work. Burnout and Engagement are independent states.	A sample of university students and employees were studied on two separate areas, Burnout and Engagement. These authors view both constructs separately. (Spain)
Bakker *et al*. (2008)	"High levels of energy and are enthusiastic about their work."	The Job Demands-Resources (JD-R) model. Job resources buffer the demands of the job.	A position paper that predicts job resources (autonomy, supervisory coaching, performance and feedback) and personal resources (optimism, self-efficacy, and self-esteem) help engagement levels in organisations.
Rich *et al*. (2010)	The investment of hands, head and heart in the performance of work.	A complete representation of one's self in the work role.	Related to Kahns (1990) work. Links employee characteristics and organisational factors to employee job performance. Their study reviews 245 firefighters and their supervisors. (USA)

Definition and meaning of work engagement

The key definitions of work engagement above indicate that in order for one to engage in their work, they need to have high levels of cognitive, emotional, and physical energies. Therefore, the construct involves state, trait and behavioural aspects. (Macey and Schneider, 2008). The above terms associate engagement with giving something more, and Frenkel *et al*. (2012) call this extra role performance "discretionary work effort" (DWE).

This author prefers Kahn's definition of engagement as it firstly represents a personal choice to engage or not, but also refers to behaviours that people bring or leave out during the work role. Therefore, Kahn describes dis-engagement as those who uncouple themselves from work. Kahn also uses three psychological conditions that drive peoples work experiences and uses these together with the task characteristics to show peoples motivation and sense of meaning at work. Kahn's article was published twenty-six years ago, but according to Google Scholar was seldom cited in its first twenty years. However, it has 1,800 citations in the past five years. Rich *et al*. (2010) built on Kahn's work, as they pointed out that his definition represented a much broader description of the construct and provided a more comprehensive explanation of relationships with performance.

The relationship with other similar constructs

Bakker *et al*. (2008: 189) specified that work engagement is an "all-inclusive umbrella" that captures different types of engagement. Macey and Schneider (2008) noted that it appeared to be a catch all construct, and casually referred to it as old wine in a new bottle. Terms such as job satisfaction, commitment (Kumar and Swetha, 2011) job involvement, and organisational citizenship behaviour (Organ, 1994) are used to describe it. Employee engagement has received as much attention as any single management approach for the improvement of individual and organisational performance in the past fifteen years (Medlin and Green, 2014). The interest has grown rapidly and remains a "hot topic" within the academic and practitioner domains with the number of books and papers growing continuously (Albrecht, 2012). May *et al*. (2004) stated that engagement was most closely associated with job involvement, while Robinson *et al*. (2004) argued that engagement contained many of the elements of organisational citizenship behaviour (OCB). Job satisfaction is widely used as a

comparable construct where engagement is moderately correlated with it (Christian *et al*., 2011). Furthermore, Christian *et al*. (2011) provide subtle differences between these constructs, such as satisfaction is an attitude to one's job, where commitment is an emotional attachment, and job involvement is related to one's identity. Although there are various opinions on the comparison of these constructs, the authors mentioned above do agree that work engagement is unique. Work engagement represents perceptions that are based on the work itself (Maslach *et al*., 2001). Work engagement is a much broader construct, in that it looks at the entire self in terms of cognitive, emotional, and physical energies.

The importance of work engagement

According to Markos and Sridevi (2012) employee engagement is a much stronger predictor of organisational performance than earlier constructs such as satisfaction, commitment and organisational citizenship behaviour. Employee engagement is a two-way relationship between employee and employer and as there is an emotional attachment the engaged person goes the extra mile beyond the contractual requirements. They point out that any improvements taken by management will not be successful without the engagement of their employees, and they use technology advancements as an example where organisations will require employees with increased professional skills that cannot be managed with old styles of totalitarian management. It is because of these expectations that employers are shifting towards engagement techniques.

There are three key reasons why work engagement is important for the organisation. Number one, it creates a positive working atmosphere. Employees who are engaged in their work, are effective, energetic, have a connection with their workplace and enjoy what they do (Kahn, 1990; Macey and Schneider, 2008). The second reason is that higher levels of work engagement are also associated with higher organisational performance, greater sales and higher profit margins (Harter *et al*., 2002). Markos and Sridevi (2012) declares that the more engaged employees are, the more likely their employer is to exceed the industry average in its revenue growth. The third factor is the ability for the organisation to continuously improve on its work practices. Although there is a direct link to organisational performance, it is more difficult to measure the individual continuous improvement contributions in terms of metrics. Slatten and Mehmetoglu (2011) found that having an engaged workforce was closely linked to the

employees' innovative behaviour. Although this study was carried out in the hospitality sector, it does show the critical role frontline workers play and their impact on innovative behaviour, as until now the literature mainly focuses on engagement increasing employee performance (Saks, 2006; Robinson *et al*., 2004). Previous findings have shown that employee engagement is positively related to positive emotions, and this positive state has the ability to broaden the employee's thought – action process (Slatten and Mehmetoglu, 2011). Taking these factors together, there are human, economic and continuous improvement opportunities for management to be concerned with employees' engagement levels at work (May *et al*., 2004). Using this argument regarding frontline engagement, it may also explain why changes in leadership behaviour and thinking are needed to allow frontline employees make their own improvements (Robinson and Schroeder, 2009).

Large consultancy bodies carry out employee engagement surveys every few years in order to gauge the opinions of employees. The Gallup (2012) survey is a global engagement measuring tool, and it assesses employees "emotional engagement" which ties directly to their level of discretionary work effort. Gallup group employees into three categories. The first category are engaged employees who work with passion and are connected to their organisation, the second group they class as employees who are essentially checked out and "sleepwalk" through their working day, putting in time but not energy or passion. The third group aren't just unhappy but act out this unhappiness and undermine what their engaged co-workers accomplish. These they class as actively disengaged.

The annual global surveys are carried out over a cross section of employees from many sectors, and the results are broken down into various groupings. They explore type of industry, age, gender, educational levels, etc. and this data then provides a snapshot of the engagement levels. When looking at engagement from an occupational point of view, professional workers score the highest on the engagement scale, with managers showing a thirty six percent engagement level versus the other end of the scale where manufacturing and production workers score twelve points lower at twenty four percent engagement. Gallup (2012) make the conclusion that professional workers probably score the highest because their jobs reflect their talents and interests. On the other hand, they conclude that manufacturing employees possibly score low because traditional management practices tend to put process ahead of people.

Although HR managers use these statistics and analysis to implement and adjust practices, many adopt their own version of opinion surveys to gauge employee's attitudes and behaviours within their own organisation. These surveys are typically run annually, and one of the reasons that surveys are used is that they can reveal information about employee attitudes that would not be shared with management regardless of the employee relations (Kennedy and Daim, 2010).

Antecedents of Work Engagement

Work Engagement Theory

The term "Employee Engagement" was first defined by Kahn (1990). Kahn's theory of engagement was based upon three psychological conditions being present. They are psychological meaningfulness, safety and availability. His theory seeks to prove that an individual will either engage or disengage based upon the presence of these three psychological factors. Meaningfulness relates to the value one places on their work role in terms of their feelings of usefulness. The safety element is the ability for the employee to carry out their work role without fearing negative consequences from their peers or supervisors. Availability represents the individual's belief that they have the necessary physical, emotional and psychological resources to do the job.

According to Maslach *et al*. (2001) Job Burnout Theory is the opposite of employee engagement. They claim that job burnout is a psychological syndrome in response to chronic interpersonal stressors on the job. Maslach *et al*. (2001) point out that although exhaustion is a key dimension of burnout, (that is the person has over extended themselves) there are two other factors that have a major impact on the ability for the individual to do their work. These are the depersonalisation component where one will detach themselves from the job, and also the feelings of inefficacy or under achievement.

Figure 5: Job-Person Fit

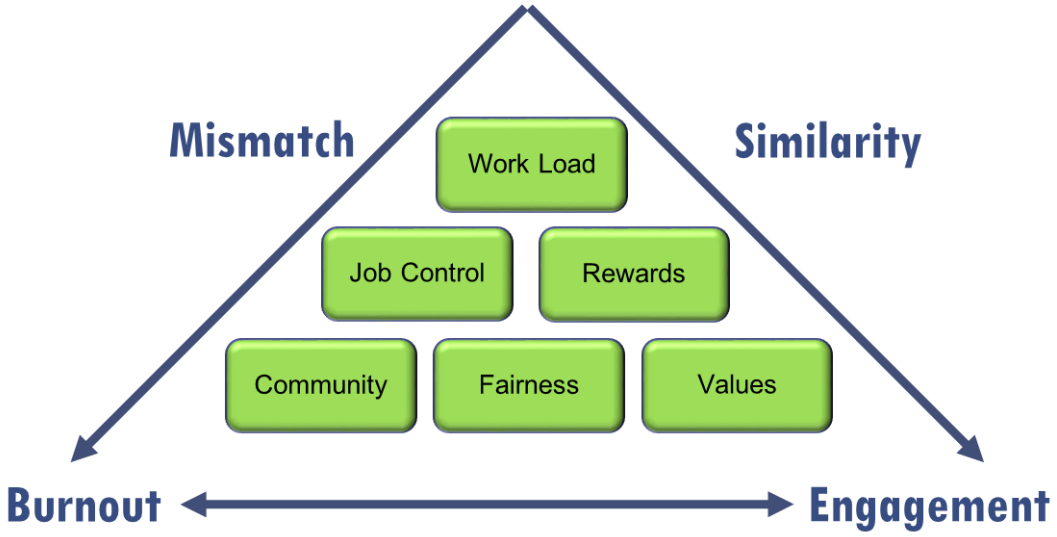


Figure 5: Adapted from Maslach *et al*., 2001.

Burnout occurs when there is a mismatch in six critical areas. These are workload, job control, rewards, community, fairness and values (Maslach *et al*., 2001). In other words, the mismatch between people and their work environment. Maslach *et al*. (2001) found that burnout occurrence was higher in employees who had little control over their own jobs. The outcome of burnout leads to poor job performance in terms of lower productivity, absenteeism, reduced job satisfaction, and other forms of withdrawal. However, people who experience burnout, also have an effect on their colleagues, and thus the construct can have a contagious effect. This theory would align itself with Gallup's (2012) categorisation of "the actively disengaged employee". According to Burke and Greenhouse (2001), cited by Maslach *et al*. (2001: 406) there is also some evidence that burnout has a negative "spill over effect on people's home life".

Figure 6: Job Demands Resources Model

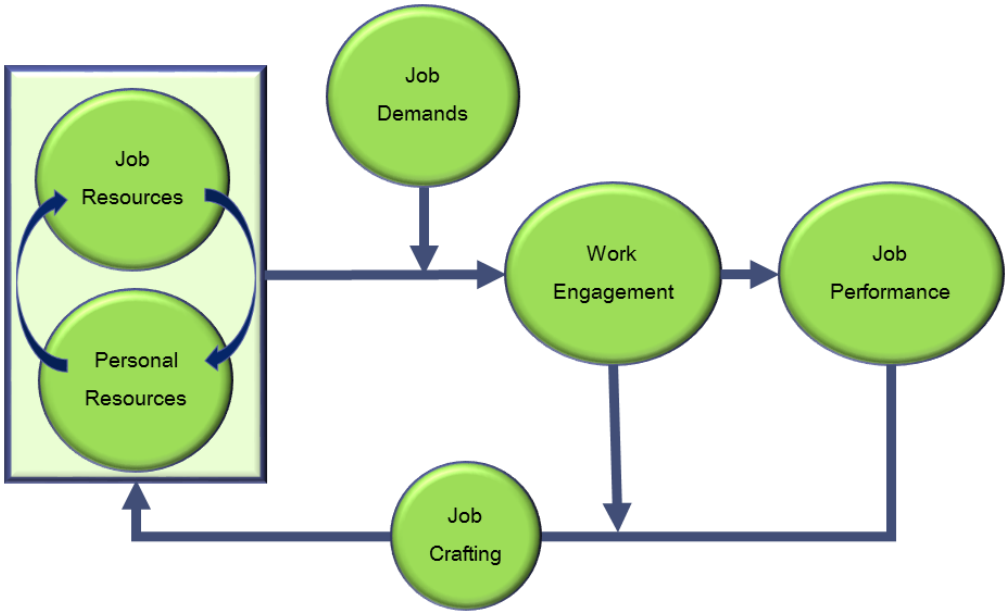


Figure 6: Adapted from Bakker and Demerouti, 2007.

The Job Demands-Resources (JD-R) model is also based upon burnout theory (Bakker and Demerouti, 2007). Many studies over the past thirty years have shown that job characteristics can impact employee wellbeing in terms of work engagement (Bakker and Demerouti, 2007). In their theory of the Job Demands-Resources (JD-R) model, they stress that working conditions are divided into two general categories. Job demands include work pressure, emotional demands of the job, the physical environment, and role conflicts that can lead to "job stressors". Job resources come from the organisation in the form of support, such as role clarity, and the task itself in terms of variety, autonomy and feedback. Therefore, it is a dual process, where the poorly designed jobs can lead to chronic job demands that can sap the mental and physical energy from the employee, while the nature of job resources is motivational.

The feedback loop in the model show how employees who are engaged in their work are able to create their own resources (job crafting) which then increases the resources and help to buffer the demands. In the "conservation of resources" model on stress, Hobfoll (1989: 516) state that "people tend to retain, protect and build resources that have the capacity to protect themselves from the demands of the job". Therefore, it can be perceived as the coping ability of the individual to engage. Thus, if one experiences stress or disengagement, this can lead to additional demands, and burned out employees

can create a negative work environment. Again, a clear link to the disengaged employee.

Job Characteristics

According to Kahn (1990: 704), psychological meaningfulness can be achieved through job characteristics when the job is "challenging, clearly delineated, varied, creative and autonomous". He based this on the work of Hackman and Oldham (1980) who identified five core characteristics associated with any job. They are skill variety, task identity, task significance, autonomy and feedback. Jobs that score high on these core characteristics will increase individual engagement (Kahn, 1990). This theory became known as the Job Characteristics Model (JCM). Although the JCM has been tested in several areas such as banking, retail and hospitals, it lacks verification in the manufacturing sector (Casey and Robbins, 2010). Their study set out to compare the JCM model across a range of industries, as existing research had yielded inconsistent results. Their findings suggested that there was no relationship across industries in terms of skill variety, task identity, task significance and autonomy. They also suggested that future research should evaluate if this is industry related or a cultural issue.

Job Variety

In the context of frontline manufacturing roles, job variety can come from increasing skills and talents so that the employee can work in many different areas. This would include job rotation, where frontline workers could move to different tasks and as such provide some variety within the job. Variety can come from cross training on other work tasks. However frontline workers tend to have limited opportunities to do this due to both the nature of their work, and the short cycle-times that are commonplace in manufacturing organisations (Treville and Antonakis, 2006).

Task Identity

Kahn (1990) indicated that job roles carried identities. The workers can either like or dislike these roles depending upon how they perceive them. People like to feel important and special in the role they perform (Claxton, 2014). The worker must see the contribution they are making. So take a manufacturing assembly line producing finished components. To an individual worker, what is their part of the process? Is

their contribution seen in the final product? This is what Hackman and Oldham (1980) refer to the ability for one to see their piece of the work in the finished article.

Task Significance

In relation to task significance, it is the task owner who decides if the job is significant or not. Hackman and Oldham (1980), used the example of aircraft brakes assembly to emphasise that tasks that appeared to have little value, may be perceived by the actual workers as highly significant. Treville and Antonakis (2006) argue that task significance is independent of job design, and comes from the product itself, or identifying with the firm itself. Therefore task significance may be related to the type of product being made, and the importance the worker places upon it.

Autonomy

Autonomy is the degree that a worker has control over their own work. This can include the procedures, methods and discretion on how the work is carried out (Hackman and Oldham, 1976). Autonomy has been considered a significant factor in the engagement of workers (Saks, 2006). As a core characteristic, autonomy gives the worker a sense of ownership for their job, and in effect a belief that they are responsible for the outcome. In fact it makes them believe that their contribution delivers the outcome and not that of instructions and standardised methods given to them by their supervisor (Gozukara and Simsek, 2016). Deci and Ryan (1987) linked autonomy to intrinsic motivation, providing greater interest, less pressure a more positive environment, greater trust and higher self-esteem among employees. Furthermore they claim that autonomy must come from within, whereas control is something that is done to people.

Job autonomy gives a sense of control and provides new and better ways of completing tasks. As a result of finding better ways of completing tasks, the worker will find it more engaging (De Spiegelaere *et al*., 2015). De Spiegelaere *et al*. (2015) elaborate on this point to show how this freedom and space provides the employee with the ability to experiment and find different alternatives and as such has the desired effect of innovative behaviours.

Feedback

The fifth core characteristic is feedback. When employees are provided feedback it acts as a motivational incentive, and can increase their dedication towards work (Bakker

and Demerouti, 2007). The employee gets a strong sense of meaning in their role when treated with dignity and respect (Sarwar and Abugre, 2013), and feedback is seen as a key requirement when managing job performance (Gruman and Saks, 2011). The intention, although motivational in nature is designed to modify the employees' behaviour or attitude in relation to their work, and offer support, thus providing a climate of trust and a positive relationship.

Job Characteristics and Job Standardisation

In the manufacturing industry, the repetition of tasks ensure that components are made the same every time and therefore reducing variation between products and ensuring consistency. In their examination of factors related to engagement in frontline jobs, Slatten and Mehmetoglu (2011) state that frontline jobs are complex and demanding, as no two customers are the same. However, this study relates to the service industry, and when you compare the same concept to that of a manufacturing worker, the job is standardised and repetitive and every product is the same. This is one of the major hurdles to be overcome in the engagement of the frontline manufacturing work tasks.

Job Enrichment was a concept promoted by psychologist Frederick Herzberg who encouraged management to make the job tasks more interesting and this would have the effect of adding variety and more challenge for the worker. Therefore, to encourage work engagement, job enrichment is an effective method of allowing employees to take more control over their work by increasing the depth of the role (Sushil, 2014). Furthermore, Sushil (2014) outlines that increasing the depth of one's job also allows them more autonomy, and thus motivates them when the nature of the work is boring, monotonous and repetitive. May *et al*. (2004) found that job enrichment had a significant impact on employee engagement. This was in terms of adding meaning to the job, and their findings suggested two important outcomes. Firstly, employers should attempt to foster meaningfulness through carefully designed jobs. Second, selecting the proper employees for the right job will enhance meaningfulness especially when they learn more about the personal aspirations of their employees. This was a field study carried out on a US Insurance company which explored the three psychological conditions from the work carried out by Kahn (1990).

A critique of current manufacturing methods is the narrowing of roles to achieve shorter cycle-times, and single piece flow (Pil and Fujimoto, 2007). Job enrichment is

concerned with the job design, so that workers have a high level of autonomy and decision making ability within their job. This contrasts with the Taylorist approach, where job design was based upon the simplification of job tasks in narrow tightly defined roles. This approach met the extrinsic motivations of workers through performance related pay, but was not conducive to the intrinsic motivations where an employee could decide how to carry out their tasks (Wood and Wall, 2007).

Many manufacturing jobs are repetitive, and thus could be classed as boring. In his mixed methods approach to predicting how employees cope with boredom at work Whiteoak (2014) suggested that employees who are better at coping with boredom will have higher levels of employee engagement. This study was carried out with industrial frontline mine workers and there are close similarities with the frontline manufacturing operator. They accepted that the job was boring, and the research set out to explore how management could design interventions that helped the employee cope in a mundane environment.

Co-Worker Support

In frontline manufacturing, the process usually consists of production flow systems where individuals add value as the component moves through the process. Take for example the assembly line. Each individual is part a larger team, and it is the performance of this team that will ultimately define their performance as a whole. Within this group, extra discretionary work effort may not be viewed by co-workers as positive for the group. This can be especially apparent in processes that have fixed piece rate output. In line with the "safety" characteristic observed as a requirement for engagement by Kahn (1990) it may be "unsafe" for a worker to out-perform their co-workers. Their colleagues may view this as being a "rate-buster". Macey and Schneider (2008) call this "job creep" where discretionary work after a period of time is viewed as part of the job and thus expected. This can lead to piece rate workers being careful not to out-perform, making this the new standard.

It can be of great concern for a frontline worker how their co-worker perceives them. Therefore, self-esteem and self-consciousness are important factors for them to feel safe in performing their daily tasks. Self-esteem has been shown to have a positive effect on engagement, and evidence show that where an employee believe themselves to be capable of performing their tasks, and these tasks are important to the organisation, then

the belief of making a difference increases their self-esteem and subsequently their engagement levels (Gardner and Pierce, 2013). Self-consciousness is an acute sense of self-awareness. When an individual worker is concerned regarding how co-workers perceive them, they find it difficult to engage in the task (Rothmann and Welsh, 2013).

Co-Worker norms keep individuals within certain boundaries during work. Group norms develop gradually as members learn what behaviours are both acceptable and necessary for the group to function more effectively (Feldman, 1984). Group norms can both be positive or negative in terms of group productivity. If the group perceive that management are supportive, then norms may develop that enhance productivity. However if management is perceived as "antagonistic" then performance may suffer.

Feldman (1984: 47) defines group norms as "the informal rules that groups adopt to regulate and regularize group member's behaviours". The ability to change from a standard traditional management system to one where the team take on the role of self-management offers huge potential in the engagement of its members. Job autonomy and decision making are seen as key components of this engagement theory. On the other hand, May *et al*. (2004) argue that individuals who must adhere to co-worker norms experience less psychological safety and this can negatively affect their engagement levels.

In his ethnographic study on how an organisation changed its control system from one of hierarchical, bureaucratic control to a more self-managed team environment, Barker, (1993) showed how this group norm developed its own system from a traditional supervisory control to that of a self-managing team. "Instead of being told what to do by a supervisor, self-managing workers must gather and synthesize information, act on it, and take collective responsibility for those actions." (Barker 1993: 413). Barker (1993) call this theory "concertive control" and points out that there is a powerful combination of peer pressure and rational rules in this system of working.

Supervisor Support

The relationship between workers and their immediate supervisor has been found to have the greatest impact on engagement (May *et al*., 2004). An individual's supervisor represents the organisation, and therefore there is a significant link between organisational support and supervisor support. Some researchers have substituted the

word supervisor for organisation (Rhoades and Eisenberger, 2002). Although the supervisor may be an agent for management, in many cases the supervisor has come up from the ranks of production operators, and as such find themselves competing with demands from management and loyalties with the frontline worker (Lowe, 1993).

Although the supervisor may be perceived as the voice of management on the shop floor, there are also individual traits whereby a supervisor may garner more support. This is an individual relationship where employees believe that their supervisor is concerned about their welfare and treats them with respect (Saks, 2006). The employee then feels obliged to participate and engage in their work, and it is not company based but relationship based. However, the character-based relationship is somewhat different, in that it is how the employee perceives their supervisor to act in terms of ability, dependability and integrity (Chughtai and Buckley, 2011). Therefore, if an employee perceives their supervisor to be competent, honest and reliable, they are likely to feel more confident in performing their tasks in a positive manner.

Changes in production systems over the years have also had a large impact on the type of supervision required. The traditional style was based on a rigid hierarchical system, where all decisions related for production came directly from the supervisor, and the operator had little or no discretion on decisions related to daily activities. This was basically control and command (Lowe, 1993). As a result, it is a big change for a production supervisor to go from this style to one of giving much more freedom to the operator, trusting them to get on with their daily job. Therefore, if production operators are given the autonomy to take responsibility for a wider range of tasks, it falls on the supervisor to adjust their role to one of coaching and mentoring. This coaching relationship has benefits for both the supervisor and subordinate, as the frontline operator receives more information on the process, and the supervisor gains an improved relationship where questions are asked and problems identified early (Rocereto *et al*., 2011).

Perceived Organisational Support

Saks (2006), argues that workers will feel obliged to repay the organisation when they receive resources. This is the basis of Social Exchange Theory (SET). The relationship between the organisation and the individual worker is built on mutual commitments once both parties abide by certain "rules" of exchange (Cropanzano and Mictchell,

2005). Resources that are received from the organisation have a higher value to the employee when they are based upon discretionary choice versus circumstances built around policy and procedures (Rhoades and Eisenberger, 2002). An example of this would be the voluntary action of the organisation versus actions taken as a result of trade union pressure.

Feeling valued is seen as a key driver of work engagement. In his work on the concepts of being valued, and the impact of this on the individual, Claxton (2014) observed three dimensions of this concept. The first was authentic pride, where one feels pride for doing a good job and is recognised by leaders and colleagues. The second was altruism where workers placed a high value on each other regardless of their skills, and the third was servant leadership. Here the value was placed on the leaders as highly supportive and approachable. Individuals valued being involved in the decision-making process. Servant leadership places the emphasis on the follower, and as such is people centred, and is seen as more personal.

Another key area of organisational support is the matter of justice. Ghosh *et al*. (2014), in their analysis of whether perceptions of justice are related to employee engagement concluded that there were three types. The three types are distributive justice, procedural justice and interactional justice. Distributive justice is the degree to which rewards are allocated in a fair manner. Procedural justice refers to people's perceptions on the fairness of rules and procedures, while interactional justice is how individuals evaluate how they are treated in terms of respect and dignity by others, including colleagues and supervisors. Therefore, in line with social exchange theory, individuals who perceive their organisation to have high levels of justice, will return this in how they carry out their roles (Cropanzano and Mitchell, 2005). On the other hand, when employees have low perceptions of fairness, they are more likely to disengage from their work roles (Biswas *et al*., 2013).

Leadership Styles and Influences on Engagement

Early Leadership Styles

The early leadership style was one of control and command. This was the traditional approach adopted by such management professionals as Fayol and Taylor. There was little consideration on the human aspect of the worker, except to make them more productive in their work role (Mele, 2003). The term economicism generally means

that profits and shareholder value take precedence over any ethical or humanistic issues (Mele, 2013). The planning and management of production is carried out by "specialists" who are employed for their skill on the mechanics of engineering, production, planning, and project management. The frontline workers are there to carry out their roles in a controlled and obedient manner (Aktouf, 1992). According to Mele (2013) the role of management was to prepare the workers activity and this included detail of individual tasks.

The early work of Fayol's managerial principles were quite traditional and economic based. Taylor adopted a scientific approach, de-skilling jobs to simplified tasks, where the leaders were the owners of knowledge and held power over production (Grint, 2011). At the time, it did appear to create an organised approach to production and had a positive effect on both increased wages and profitability. However, it would be deemed economic in nature, as the workers were given quite mundane tasks that led to boredom and stress. Later these methods were further supplemented with the introduction of the assembly line by Henry Ford. This was seen as a huge leap in productivity, but complaints began to emerge due to the monotonous repetition of tasks (Mele, 2013).

Towards a Human side of Leadership

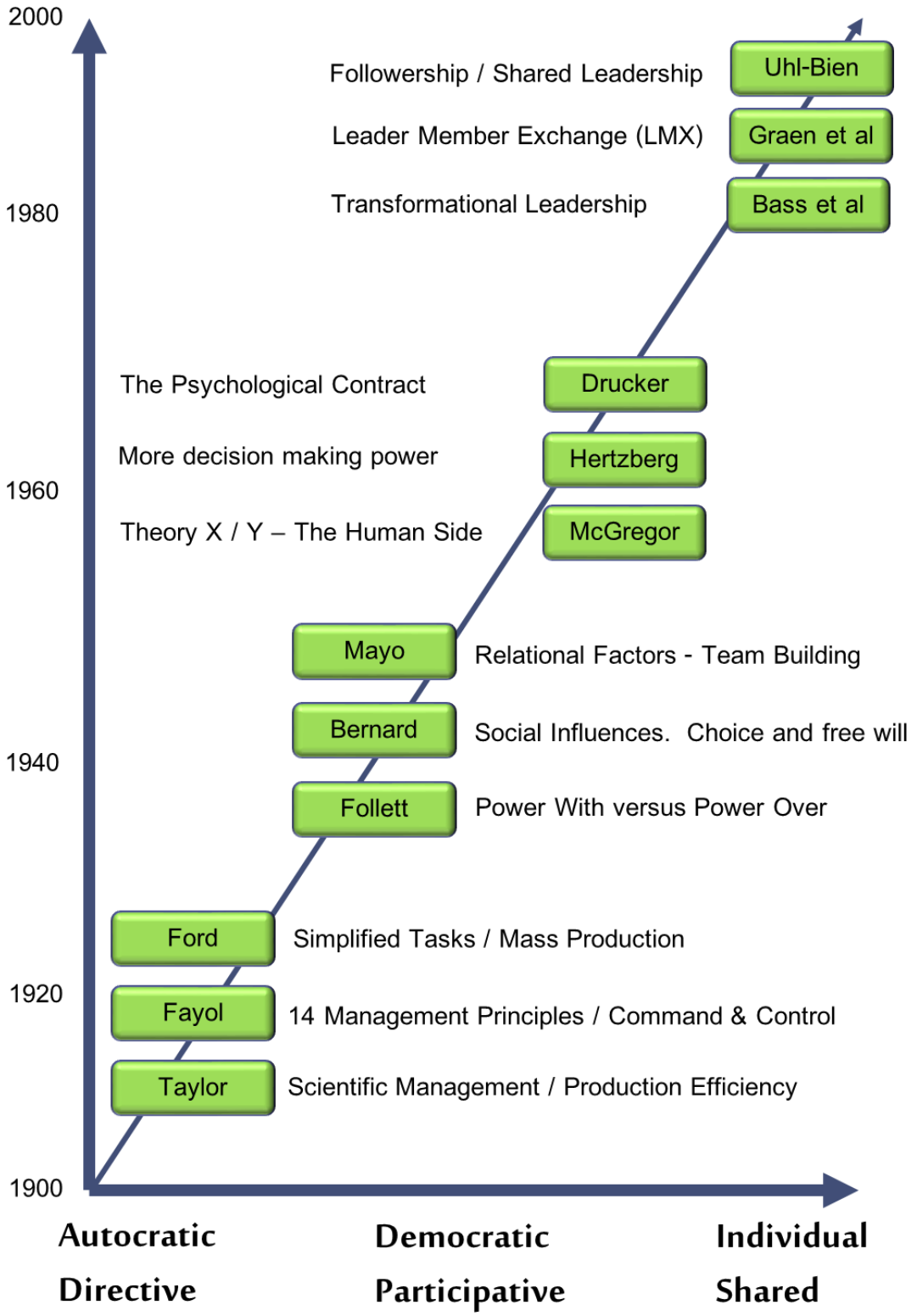
In moving on to a more humane style of leadership, Follett's (1940) view was not task orientated. She was not interested in the finer points of time and motion studies, and the technicalities of task management, but how to get people to cooperate. Although Follett knew that managers must account for the technical side, she argued this was a science, while dealing with people is "a gift that some men possess and some do not" (Follett, 1940: 123). She did not state whether this was an inherent quality or could be learned, but pointed out that dealing fairly with people is not a matter of technique, but a certain practical knowledge (Mele, 2013). Another advocate of this viewpoint was Chester I. Bernard who stressed the importance of man. He wrote: "To what extent do people have power of choice or free will" (Bernard, 1938, cited by Mele, 2013:54). This shift in leadership style coincided with the "Hawthorne Experiments" in General Electric, where rationality of scientific models were replaced by normative power where it was realised that measuring work in this way was flawed, as "the very act of

measurement altered the experience and thus the behaviour of those being measured" (Grint, 2011: 8).

Not long after, Elton Mayo (1946), stressed the importance of human behaviour in organisations. He argued the point that although we had made great progress in technical terms, we lagged behind in our social skills with managing industrial workers. Following on from this organisational philosophy, McGregor (1960) and Hertzberg (1976) wrote about giving more decision-making power to the workers. Although they agreed that business needs to make profit, they argued that treating people in a more humane way will increase performance. In a further development of the human element in organisations, Drucker (1973) looked at individual needs within working groups. He believed that if an individual felt part of the community, it would increase the performance level.

These methods certainly began to look at the workers as being much more than resources that were to be ordered and controlled, but individuals that should be respected for their contribution, and not only working tasks. However, some authors believe that there are conditions where a humanistic approach is not appropriate. Alvesson (1982) states that managers often neglect the humanistic approach and prefer more authoritarian rules due to the control required. Lorsch (1975) also takes this position and suggests that most factory managers are more in favour of the Taylorist principles than the humanistic way. The theory put forward to support this style, is the conflict between work and capital and the interests of capitalists and managers to maintain control over the production process (Zimbalist, 1975).

Figure 7: Evolving Leadership Styles



The Humanistic Approach

The Humanistic approach is a style of management that has a deep respect for people. It believes that human dignity should be respected in business, and with open and trusting dialogue business should serve people (Spitzeck, 2011). Aktouf (1992) takes a much more radical view of traditional management practices, and advocates moving towards a radical humanistic approach that simply centres attention on the person, their deeds and sense of self play a pivotal role in all activities. He proposed that organisations need to rely on a more radical humanistic approach than the functionalist tradition. His writings were based on transforming passive obedient workers to active-cooperative employees that had control over their own working environments.

Although the term "work engagement" seldom appears in humanistic literature, the use of associated terms such as motivation, job design, involvement, commitment and participation are used to describe managerial methods aimed at a humanistic approach which can contribute to better performance (Mele, 2013). As work engagement is discretionary by definition, an individual's treatment cannot be influenced through power, as having power over someone is not an effective motivational tool (Follett, 1940).

Humanism puts the employee centre stage. Aktouf (1992) lists four areas that have a negative impact on motivating the human being. They are estrangement from the product, where the worker has no control over the process. The second is the act of work where tasks are never their own but dictated by bosses. The third is estrangement from nature, where working hours are not in line with the biological clock and this would be a significant factor in manufacturing frontline work where shift work is standard practice. The forth negative impact is estrangement from the human element, where workers are not allowed to be themselves and are constantly in conflict with others who use them to achieve goals at the expense of the worker having their own free will and choice of how to create their own surroundings. In line with one of Kahn's (1990), psychological factors of engagement Aktouf (1992: 418) argues that the above "estrangements" have "robbed industrial work of its meaning". His view is that management must restore meaning to work, to deal with motivation and commitment.

Humanism as a Leadership Style

Leadership style is the way a manager interacts with employees in the workplace, particularly subordinates (Richer and Vallerand, 1995). Although no single style has been found to be an optimal style, there is an argument for a more flexible and supportive type (Hardre and Reeve, 2009). In line with this theory, and the link to engagement, supporting employee's motivation has potential gains in terms of both productivity and workplace climate (Deci *et al*., 1989). Management is about planning, organising, and controlling the operation to ensure that results are met for the various stakeholders. However, leadership is about establishing direction, inspiring and motivating people that usually influences change that overcomes bureaucratic barriers (Kotter, 1999).

Leadership style is an important requirement for a humanistic approach. In industrial organisations, management have focused mainly on the technical aspects of work systems (Zacharatos *et al*., 2007). This in turn has neglected the human aspects of the job. Mele (2013) calls this "personal competences" and points out that moral character is of increasing importance for humanistic management. He argues that in traditional organisations managers tend to have technical skills and analytical competencies, but their character is not seen as relevant. The resources that come from the organisation in terms of support, conditions, personal resources, and feedback can compensate for lower levels of work-related characteristics, and these social skills from leadership can bring about higher levels of engagement (Shantz *et al*., 2014). Therefore, in line with a more humanistic approach, we need a style that support the workers allowing for more engagement. Both transformational leadership and leader-member exchange (LMX) are rooted in the social exchange process, (Anand *et al*., 2011) and therefore offer good potential for motivating frontline workers to engage.

Transformational Leadership

Saks and Gruman (2014) suggested that transformational leadership was directly related to job resources and job demands. Studies have shown that the behaviours of transformational leaders are positively correlated with work engagement (Gozukara and Simsek, 2016). Transformational leaders demonstrate four typical behaviours; (1) idealized influence is where the leader has high moral and personal standards, (2) inspirational motivation, is where the leader has a strong vision for the future, (3)

individualized consideration describes the leader as one to identify and meet their followers' developmental needs, and (4) intellectual simulation where they encourage creative thinking (Bass *et al*., 2003; Jin *et al*., 2016). This leadership style is supportive, but also skilfully supervised, as the worker will feel that they are also challenged, involved and as a result more engaged in their tasks (Shamir *et al*., 1993). This leadership style also has a strong relationship with job autonomy (Bass and Avolio, 1990).

Leader-Member Exchange (LMX)

This style of leadership works on the principle that each leader-follower relationship within a work group is unique, and it is not an average perception of the leader from the group as a whole (Anand *et al*., 2011). The basic principle is that the leader develops closer relationships with some subordinates than others, and this contrasts with earlier approaches that all were treated the same (Brower *et al*., 2000).

The quality of the relationship between the supervisor/manager and the subordinate is a supporting and facilitating one. It is likely that a worker will be more engaged in their job when this relationship is strong, and their leader facilitates and encourages more intrinsic empowerment and autonomy (Breevaart *et al*., 2015). Breevaart *et al*. (2015) expands on this and states that employees in high quality LMX relationship with their supervisor also have a higher quality relationship with their co-workers who also have a strong relationship with the same supervisor.

Followership / Shared Leadership

Despite the amount of material written about leadership theory, until recently there has been very little written about followership (Uhl-Bien *et al*., 2014; Sy, 2010) and where it has been addressed in the literature it tends to refer to followers in a traditional setting, seen as passive and deferent. This notion also places the emphasis on the inferiority of followers. This traditional perception defined followers as lacking power, status and authority and their inferior position eroded their dignity and put a strain on their well-being (Lapierre and Carsten, 2014). This has important implications for the engagement of frontline workers.

There are many different ways in which a follower may perceive their role within the organisation, and this will link directly to the leadership style practices within their

place of work. Passive followers believe that they should do things "the leader's way" and the leaders have the expertise, experience and insight to make decisions and solve problems (Lapierre and Carsten, 2014). The second type is more an anti-authoritarian follower who believes that working with or supporting a leader means giving in. These remain silent like the passive followers, but do not comply and seek to negatively affect the progress of work (Carsten *et al*., 2013), very much like the "actively disengaged worker" mentioned earlier. The third follower role is a proactive one who takes initiative and challenges the leader when needed. Proactive followers believe that they have much to offer and engage in their work in a constructive manner. This proactive follower role is closely linked to the engaged worker.

Carsten *et al*. (2010) found that followers who had a strong relationship with their manager were more comfortable sharing their ideas. In relation to autonomous working and employee engagement, followers who had a strong belief in the co-production of leadership, reported that highly bureaucratic working environments prevented them engaging with their manager, as they had little control over their own work. Carsten and Uhl-Bien (2012) noted that when leaders are more "open" to take opinions from subordinates on board these results can aid the organisation in creating a climate that encourages followers to engage with leaders in a constructive manner.

Leadership Style – Supporting the Frontline Worker

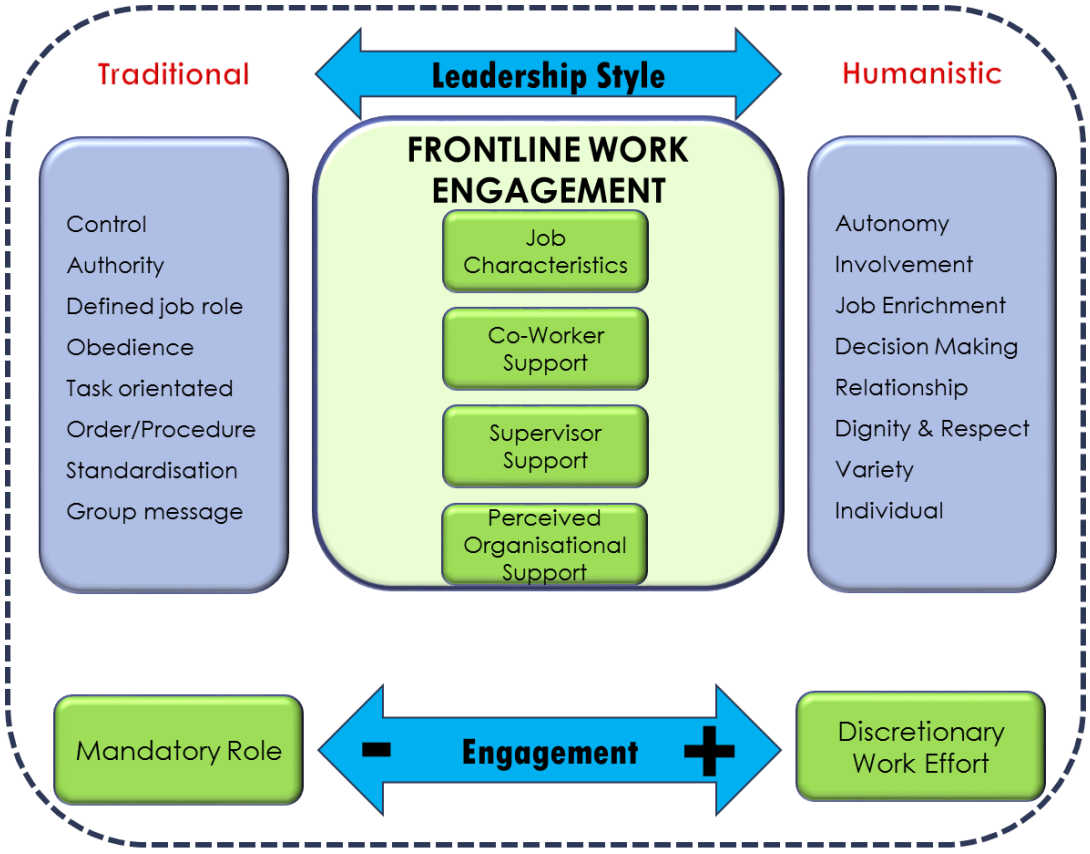
It is important to distinguish between controlled motivations from autonomous motivation. Controlled motivation is pressure based and imposed by force (Deci and Ryan, 2000). In contrast, autonomous motivation is intrinsic and self-authored. There is a link between motivational theory and engagement theory, as the individual finds the activity interesting. Linking this then to leadership style, researchers need to find what managers can do to support this type of "motivation-engagement". This appears to be a worthwhile exercise, as there are several positive outcomes including skill development, effort, engagement and enhanced job performance (Hardre and Reeve, 2009). Hardre and Reeve (2009), point to four leadership behaviours that will support this. In their study on the adoption of a more autonomy-supportive motivating style of management towards employees, Hardre and Reeve (2009) tested a theory that would improve the method leaders used in their interpersonal relationships with their subordinates.

The basic premise is that employees who experience an autonomy-supportive motivating style will engage more than those who are more "controlled" by their supervisors. The manager behaviours that impacted this were in four areas. The first is the nurturing of inner motivational behaviours. This involves understanding what drives a worker to engage, and what is their own intrinsic motivations. The second effort is relying on non-controlling language. This can be the subtle difference between rigid pressure-based communications versus a more flexible style. The third style is about providing explanatory rationales. This is about taking the time to explain why a particular job is important. This would be particularly important to the frontline manufacturing worker as Hardre and Reeve (2009) point out that many workplace activities are not interesting so this step provides the awareness element. The final step is acknowledging and accepting expressions of negative affect. It is normal for employees to resist certain workplace rules, work types and procedures, and this is where listening and understanding can have a greater influence than quickly counteracting and resorting to controlled types of motivations.

In essence what we are trying to achieve is an environment that facilitates empowerment. When an employee is given more opportunities to self-manage, they will perform better in a work setting (Wong Humborstad *et al*., 2014). It is a form of joint responsibility. Leaders delegate responsibility eliminate formal policies and remove conditions that foster powerlessness (Van Dijke *et al*., 2012). As such empowering leaders allow their subordinates to act with higher levels of discretion without the typical bureaucratic constraints (Margolis and Ziegert, 2016). The framework in the next section is derived from the literature, as if supervisors enact policies that encourage team members to take responsibility for their own work, through coaching, leading by example, participative decision making and demonstrating concern it can lead to greater levels of discretionary work effort from the frontline worker, and thus higher engagement levels from the team.

The Conceptual Framework

Figure 8: The Conceptual Framework



The Conceptual Framework

This framework identifies the four key antecedents for the engagement of workers from the literature. The basic premise is that if managers and supervisors adopt a traditional style of leadership in the organisation, the frontline worker may be less likely to engage in any extra activities, other than just completing the mandatory function of their role. The list of traditional leadership styles are identified on the left-hand side, and are associated with the control and command style of traditional leadership.

On the other hand, if the frontline worker perceives the organisation to be more humanistic in the way managers and supervisors interact with them, they may be more likely to become involved and engage with the organisation. This is called discretionary work effort as although is not part of the written contract, is based upon investing far more than is asked of them in their role. This conceptual framework attempts to show a link between work engagement theory and humanistic leadership styles.

Research Questions

A. Explore if job characteristics that have high levels of autonomy, variety, and perceived as meaningful to the frontline manufacturing sector are associated with increased levels of work engagement.
B. Examine the current leadership style practiced by supervisors and managers, and the perceptions of frontline workers on their propensity to engage in the workplace.
C. Evaluate the relationship between engagement theory and humanistic leadership styles to assess the impact they have on the frontline sector participating in discretionary work effort.

Methodology

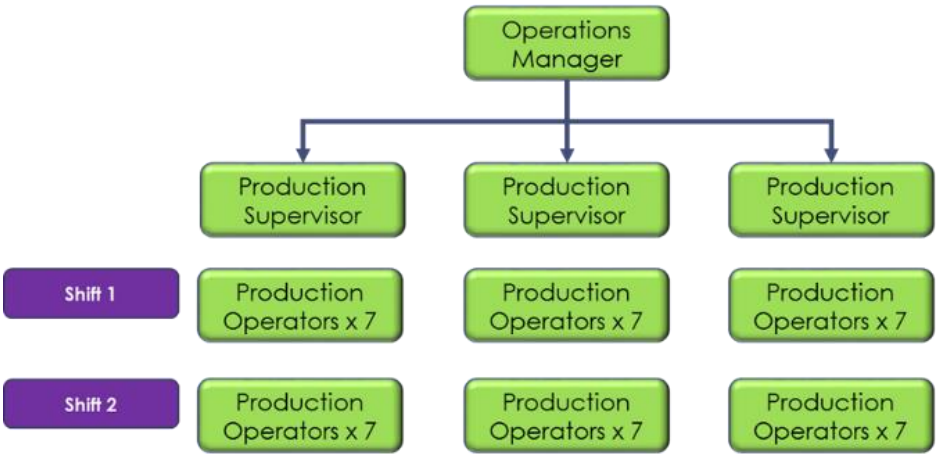
The Organisation

Honeywell International Inc. is an American multinational company that produces products for consumers, corporations and governments. Its business units consist of Aerospace, Automation & Control Systems and Performance Materials and Technology. Honeywell has a global workforce of 130,000 employees and is a "Fortune 100" company. Honeywell design, develop and manufacture a vast array of products in over seventy countries worldwide.

Honeywell Aerospace, Waterford.

Honeywell Aerospace Waterford manufactures high precision compressor airfoils and fanblades for aircraft engines. It is a manufacturing site with eighty employees. Over half of the employees work as direct manufacturing operatives. The operation runs on a two-shift basis. The operations department is divided into three areas. They are Forging, Machining and Final process. Each area has a supervisor.

Figure 9: The Operations Structure



The Frontline Manufacturing Role

The manufacturing process is a high-volume forging, and machining operation, transforming metal billets into engine parts for the aerospace industry. Processes are fixed, and quality control is paramount. There are fifteen processes that each part goes through. Frontline manufacturing tasks continue to be standardised into small incremental steps that are quite short and repetitive. Parts are produced in a very short cycle-time, moving them on to the next operation in a single piece flow where possible. Reducing the variation in the process is paramount to ensuring that each component is exactly the same, thus repeatability.

Annual Engagement Surveys

The facility operates under a standardised "Lean Operation". There is extensive use of lean manufacturing tools, similar to "The Toyota Production System". Each facility within the multinational group follow these standardised practices. Employee engagement is measured annually using an employee survey, and this is based on 20 questions measured by a Likert scale. This is a quantitative survey and scores are processed centrally. Regional league tables are then formulated from the results and the HR department is responsible for communicating the results and developing action plans to address the lower scores. There are limitations to these type of surveys. The measurement is based upon employee self-opinions. Self-surveys have their limitations. Johns (1994), argues that they rely on employees' self-reports of their levels of engagement and there is ample evidence in the literature of a self-serving bias when employees report their own behavior such as performance. A second limitation

of this method is employees know that it is not favourable for the facility to be at the bottom of regional league tables. Harb (2011) stated that since higher scores are viewed as desirable by organisations, this self-assessment may be subject to social desirability bias.

A Qualitative Approach

The majority of work engagement research is completed through quantitative survey based questionnaires. The literature is dominated by these methods and they fail to capture the individual experiences of engagement and disengagement (Sambrook *et al*., 2014). The actual data collected by professional bodies and HR departments tend to be survey based. Kahn (1990) used an ethnographic research process in his studies of the concept. He proposed that the quantitative methods are not designed to get at the depth of work engagement due to the underlying rich data that comes from the detail behind the numbers. Watson (2011), proposes that there needs to be more participative and close-observational research to understand others' subjective experiences. This research will focus on the leadership style, and the perceptions of the frontline workers and their supervisors in an action based research project.

A participative approach in a qualitative framework will be used. It is the intention to achieve a deeper understanding on what motivates a frontline manufacturing worker to either engage or disengage in their daily work. Four areas will be analysed as part of this research, and they are job characteristics & standardisation, perceived co-worker support, perceived supervisor support and the organisational support. These will be investigated in the context of the perceived leadership style.

Action Research on Engagement

This action research project is designed to take a critical look at how leadership styles impact on the engagement of the frontline manufacturing worker. This is a participatory action research technique, and therefore in line with a more humanistic leadership style, those affected can have a say in the decisions. In doing research in your own organisation, Coghlan and Brannick (2014) argued for this type of research as it focuses on concerns of powerlessness, and this can move to empowering people to use their own knowledge. The action research technique is more suited to the complex and sensitive nature of employee engagement in the context of a participative approach, as in line with humanistic management is ultimately more conducive to collaboration. It

allows individuals of the organisation be part of the solution and know they can contribute to the potential outcome (Susman and Evered, 1978).

The objective is not to design the action research process, however there are three aims in using the action research approach. It helps the researcher learn about themselves (reflexive), two it helps build and sustain a collaborative relationship with colleagues through working together on an important problem, and three it provides knowledge to a wider audience that have not been part of the research, but may benefit from the outcome (Coghlan *et al*., 2014). The planned study is based upon the perceptions of frontline manufacturing workers on aspects of their work role, the job tasks and the relationship they have with co-workers, supervisors and management.

Conclusion

This conceptual paper is based upon the engagement of frontline manufacturing workers in the context of the leadership styles practiced by the organisation. Based upon the literature, the manufacturing sector continues to use traditional leadership styles that are process based, and not conducive to the engagement of their workers.

This paper attempts to bind work engagement theory with humanistic styles of leadership to demonstrate that if an organisation adopts this approach, then the frontline workers will move from just complying with the mandatory function of their job to giving extra discretionary work effort, and thus increasing performance.

Through understanding the dynamics of working as a frontline employee, get an insight as to what motivates the individual to engage or disengage. As engagement is an individual concept, managers and supervisors need to tap into individual needs, getting beyond the daily tasks and having the ability to adapt the leadership style in supporting, coaching and mentoring each employee. This allows them the autonomy to take ownership of their own job. This in turn can have a positive effect on working relationships, making the organisation not only perform better, but an improved climate to continually develop and grow.

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Paper 2: Research Methodology

Preface to Paper 2

The final conceptual framework from Paper 1 identified four key factors of work engagement from the literature. These were job characteristics, co-worker support, supervisor support and perceived organisational support. This initial model sought to explore these factors in the context of the style of leadership practiced by the organisation. It was proposed that where a traditional style of leadership was followed, then the frontline worker would only complete their mandatory role. Applying a more humanistic approach in leadership style would motivate the frontline worker to engage more through their own discretionary effort. However, following a further review of the literature, this model was developed into a three-dimensional cube that focused on three key factors of engagement. These are leadership style, followership and autonomy, and their development will be explained throughout paper 2.

Research Approach

In Paper 1 the researcher advocated an action orientated research approach. At this time, the author had a keen interest in working with the frontline workers themselves in a way that would be conducive to becoming involved with the research and thus action plans could be developed and implemented. However, during feedback from the external examiners, it was recommended that a more exploratory research methodology should be considered. Action research was deemed not appropriate due to the inherent bias that may impede participation. It was outlined during feedback sessions that it may be difficult to achieve collaboration among the participants where the researcher is their direct manager. This inherent bias may evoke suspicion, and the employees may withdraw their willingness to participate. Based upon this feedback, an exploratory case study was deemed to be a more appropriate research approach. Although researcher bias remains a concern at this point, every effort will be taken to reduce its effect during the design of the research methodology.

In line with the initial conceptual model, paper 1 outlined three research questions. These were based upon traditional and humanistic styles of leadership. As the conceptual framework was revised, so too were the research question and objectives. Five objectives were considered, the first to establish the current engagement levels, then three to cover each factor of engagement, with the final question based on the interrelationships that exist between the key factors chosen.

RESEARCH PAPER SERIES

PAPER 2 - METHODOLOGY PAPER

"Exploring work engagement of the frontline manufacturing sector: A case study approach"

Abstract

Work engagement has become one of the most popular topics in human resource management studies over the past ten years, and more recently in human resource development (Saks and Gruman, 2014; Valentin *et al*., 2015). The motivation for the frontline manufacturing operator to give extra discretionary effort to their job is quite complex, and a concept that is difficult to explain from a positivist perspective (Saks, 2006). This research will contribute to work engagement theory and practice, as it aims to probe below the surface and address the problems manufacturing operators face engaging in their job. The research will use a range of techniques to explore the perceptions of managers, supervisors and operators to understand why an operator chooses to engage or disengage. It will explore the engagement of the frontline workers in relation to leadership style, the workers own motivation to participate and the autonomy they have in their daily work tasks (Carsten and Uhl-Bien, 2012).

Although manufacturing workers tend to have low engagement levels (Gallup, 2012), this researcher will attempt to address this problem through interpretive exploratory research, combining his own individual experience in an insider single site case study. Multiple sources of evidence will be collected from frontline workers, supervisors and managers through interviews, focus groups, and observations. The study of work engagement has almost been researched exclusively through quantitative research both through academia and practitioner led inquiry's (Sambrook *et al*., 2014). While this type of research identifies key areas to address, it is mainly carried out in organisations through external practitioners, and as a result does not gather the rich underlying data of engagement as a "deeply personal state" (Kahn, 1990: 700). This case study approach aims to address this gap, and through the use of multiple methods of data gathering, explore what organisations can do to increase engagement in the manufacturing sector.

Introduction

This paper outlines the methodological approach taken in this research study. It begins by first establishing a common thread between work engagement, leadership style, followership and autonomy, framing these into a revised conceptual model. This revised model on engagement forms the basis for the research questions and objectives. There are five objectives to be addressed in this research. These objectives originate directly from the theory outlined in the first paper, and all relate to issues affecting engagement levels in a standardised manufacturing organisation.

The research approach explores the most beneficial method to answer the research questions. It takes account of the researchers own philosophical assumptions and considers a number of approaches before deciding upon a single case study strategy to address the problem. The paper then outlines several data collection methods and data analysis tools that have the most potential to obtain rich information. Finally, ethical considerations are reviewed, emphasising the fact that the author will be researching his own organisation.

Theoretical Perspectives on Engagement

The initial conceptual framework in Paper 1 explored the continuum between the traditional and humanistic approach to leadership style in relation to work engagement. This identified four key antecedents for the engagement of the frontline worker; namely (a) Job Characteristics, (b) Co-Worker Support, (c) Supervisor Support and (d) Perceived Organisational Support. The argument put forward in the conceptual paper is that if an organisation practices a more humanistic style of leadership, then the frontline worker would be inclined to move from a position of compliance with the basic mandatory function of their role to a much higher level of discretionary effort.

Three factors feature highly in the improvement of work engagement. The first, "leadership style" is deemed a significant factor when influencing workers to go above and beyond their functional role. When individuals are provided choice and freewill, previous research has shown that it strengthens their self-perceived autonomy, as they were more likely to engage in activities if they believed that they had chosen them in the first place (Lewin, 1952; Patall *et al.*, 2008). DeCharms (1968) classified this concept as personal causation, indicating that ones' behaviour stems from their own preferences and as a result will value this behaviour and its outcome. The second factor

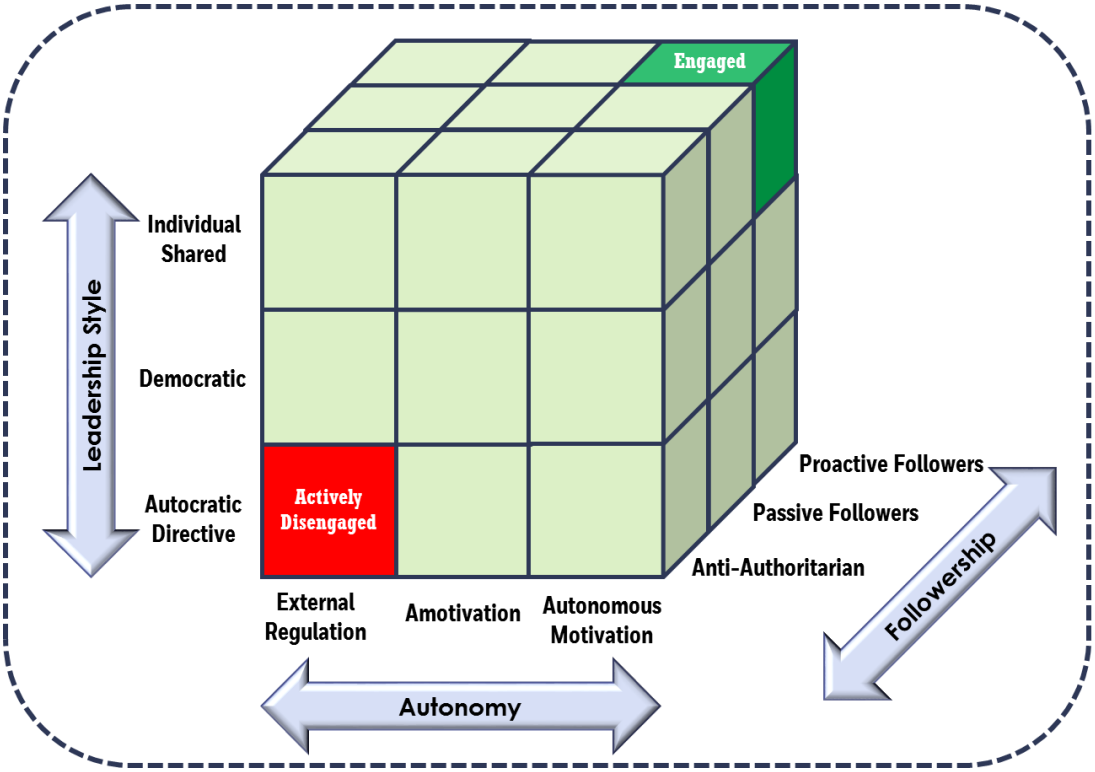
"followership" pays more attention to the role the follower plays in the leadership process. The vast amount of leadership research focuses on leaders, and there is little time spent considering this perspective from the "followers" viewpoint (Uhl-Bien *et al*., 2014). The term "followers" carries with it connotations of subordination, submission, passivity, and lack of control (Bligh, 2011). The role the followers play in the overall process is important as the focus shifts from the leaders' style to the followers' beliefs and behaviours (Carsten and Uhl-Bien, 2012). The third factor "autonomy" refers to the amount of freedom the worker can exercise when carrying out their job function. Extrinsic and intrinsic motivation feature highly in work engagement theory, and it is suggested that extrinsic rewards are less likely to motivate workers due to the desire for people to want autonomy in their daily lives (Meng and Ma, 2015).

A Revised Conceptual Framework

In light of the perceived linkages that occur between engagement theory, leadership style, followership and autonomy, the conceptual framework has been narrowed down to explore these three concepts in terms of the relationship that exists between the frontline manufacturing operators and the organisation, with the aim of exploring how they relate to increasing work engagement. The revised conceptual framework shown below in Figure 10 as "The Engagement Cube" indicates that while all three dimensions themselves are proposed to influence engagement levels, and lie along their own continuum, they are interrelated. This relationship takes the form of a three-dimensional cube. The bottom left-hand block is associated with a more traditional approach to leadership, followership and autonomy, and as we move along the X, Y and Z axis we progress to a more humanistic approach where the conditions are more positive for increased work engagement levels. Humanistic management has been viewed by many to enhance productivity and develop the human potential by focusing on human behaviour (Daley, 1986). This humanistic approach to how we work together has a much greater potential of achieving increased engagement in the manufacturing sector. Developing group interventions to increase work engagement has been shown to have a significant impact on well-being especially when increasing the resources available to the employees (Knight *et al*., 2016). Although work engagement may be influenced by improving the perception of organisational support, it is also contingent on the cultural values that workers hold individually (Zhong *et al*., 2016) and therefore

require a deep understanding as to how these perceptions can be adjusted to improve engagement levels.

Figure 10: The Engagement Cube



Leadership Style

The styles of transformational leadership and leader-member exchange (LMX) have already been shown in the conceptual paper to support employee engagement (Gozukara and Simsek, 2016; Breevaart *et al*., 2015). It is important to understand just where on the engagement cube of leadership style the organisation is and the effect it has on the engagement levels. The leader who establishes and builds relationships and takes their followers opinions into account can achieve much higher levels of work engagement than strictly focusing on task performance (Carsten and Uhl-Bien, 2012). This is a shared style of leadership, and Chiniara and Bentein (2016) acknowledge that leaders empower their followers by giving them extra responsibilities, and the freedom to handle situations by themselves. In these situations, the follower is more comfortable in sharing their ideas, knowing that it won't result in a negative response. On the other end is the autocratic or directive style where frontline employees are seen as inferior, and Taylor (1947) believed that this direction and control was required due to "mentally sluggish" followers that need constant supervision. It will be important to understand

the conditions or reasons leaders feel that a more directive approach is required and the relationship to a more hierarchical or bureaucratic style in nature. In the centre is the democratic leadership style and this is a balance between autocratic and shared. Although decision making is decentralised and shared to a certain extent, it requires a huge amount of effort to obtain workable results. Although leaders involve followers in the decision-making process, it has been argued that this occurs only under certain circumstances and often only to get cooperation with the chosen choice of action (Uhl-Bien *et al.*, 2014).

Followership

In the past the term followership was more associated with an image of hierarchical top-down subordination defined by powerlessness and obedience (Carsten *et al.*, 2010). The relationship between the frontline worker and leadership remains a complex and relatively unexplored phenomenon in terms of the role of leadership and followership processes that either supress or foster effective employee engagement (Bligh, 2011). The need exists to explore the linkages between this relationship and the effect it has on the engagement of the frontline production worker. This role may be seen as a proactive follower who speak up and want to have their ideas acted upon in collaboration with their managers, or a more passive approach where they follow instruction and refrain from any further involvement than just completing their mandatory role (Uhl-Bien *et al.*, 2014). On the other hand their perception could be much more damaging in that their role is perceived as anti-authoritarian and any support given to the organisation is seen as giving in. This is not how individuals behave relative to their work, but relative to those with higher status. For example "it's not my job", or repressing opinions from leaders as a way to show non-compliance (Carsten *et al.*, 2010).

Autonomy

The degree of autonomy or discretion given to employees is one of the main factors for improvements in productivity, performance, job satisfaction and work engagement (Breaugh, 1999). This autonomy has been mostly researched under the Job Characteristics Model (JCM) (Hackman and Oldham, 1976). External regulation is control based where the worker is either motivated by an external incentive or a negative consequence, such as being watched by a supervisor. This approach has been

associated with the traditional style of supervision, while autonomous motivation is associated with a more humanistic style and intrinsically based where one finds the work enjoyable and interesting (Hardre and Reeve, 2009). In the centre is amotivation relating to a person who is neither intrinsically nor extrinsically motivated and just goes through the motions without any real engagement and poor employee functioning (Gagne and Deci, 2005). Although the majority agree that in general, employees should be given more discretion in the performance of their job, there is disagreement in relation to the understanding of job autonomy and what should be included (De Spiegelaere *et al*., 2016).

The Impact on Work Engagement

There is significant evidence that leadership style, followership and autonomy influence engagement levels within the organisation (Carsten *et al.*, 2010; Deci and Ryan, 2000; Uhl-Bien *et al*., 2014). The key to this research, is to fully understand the linkages that occur between the three dimensions and work engagement. Although work engagement is the very concept being explored, one needs to understand the impact each dimension has on the frontline workers motivation to go above and beyond the mandatory function of their job and give greater levels of discretionary effort. What is not so clear is the effect that one dimension has on another dimension. For example, can an autocratic leader encourage a more proactive follower, or are there conditions where a more directive approach is required due to the relationship that exists or the level of control required in a certain operation?

It is worth exploring the root cause of why one chooses to engage or disengage in their work. Conditions may be favourable for increased levels of engagement such as organisational support, but the frontline operator may choose not to engage for their own particular reasons. There may also be aspects of the job where a directive approach is required. Individual relationships with those in authority can also be a driving factor for engagement levels and the leadership style and followership behaviour may be based upon this relationship and situation. Historical issues with the organisation can also affect how one feels about participating and collaborating in their daily work setting. There is also evidence between weak levels of work engagement and job resources that suggests engaged workers are able to create their own job resources

(Bakker *et al.*, 2010). It is these deeply held personal issues on why one chooses to engage or not that need to be explored further.

Research Questions and Objectives

The overall aim of this research is to explore the factors that cause frontline manufacturing operators to either engage or disengage in their work. Therefore, the overarching question is;

How can the engagement of frontline operators be improved upon in a standardised manufacturing operation?

This research aims to examine the level of control within the process itself and the effect of work standardisation in terms of work methods, scheduling and decision making ability. There is the need to reflect upon the leadership style, and the effect this style has on empowering the frontline worker. This will consider how the organisation can nurture an autonomy-supportive motivating style of leadership versus a controlling style that prevents the frontline worker from tapping into their inner motivation to engage. Although the organisation may provide the conditions for improving engagement levels, there is no guarantee that the frontline worker will automatically accept more autonomy or provide increased levels of participation and collaboration based upon organisational support only. For this reason, one needs to get a deep understanding of their own perceptions of the organisation and motivation to go that step further when the conditions exist to do so. With these themes in mind the following objectives will be addressed.

1. Assess current engagement levels as perceived by the frontline manufacturing workers in relation to autonomy, intrinsic motivation and organisational support.
2. Explore the impact the current style of leadership has on the frontline workers motivation to provide greater levels of work engagement.
3. Explore the frontline operators' perceived role as followers in participating and collaborating with the organisation and how this affects work engagement.
4. Explore the level of autonomy the frontline worker has in a standardised manufacturing environment and how it influences work engagement.

5. Analyse the interrelationships that exist between leadership style, followership and autonomy in achieving increased levels of work engagement.

The Research Onion

Having already considered the research question and objectives, one must now establish the correct methodological choice ensuring it is in line with the theme of the research. Holden and Lynch (2004) argue that this choice should be a consequence of the philosophical stance taken by the researcher and the phenomenon to be investigated. How one views the world has a direct impact on how it can be understood and analysed (Adcroft and Willis, 2008). One framework to address this early in the choice of methodology is the "research onion" (Saunders *et al*., 2011), as shown in Figure 11 below.

Figure 11: The Research Onion

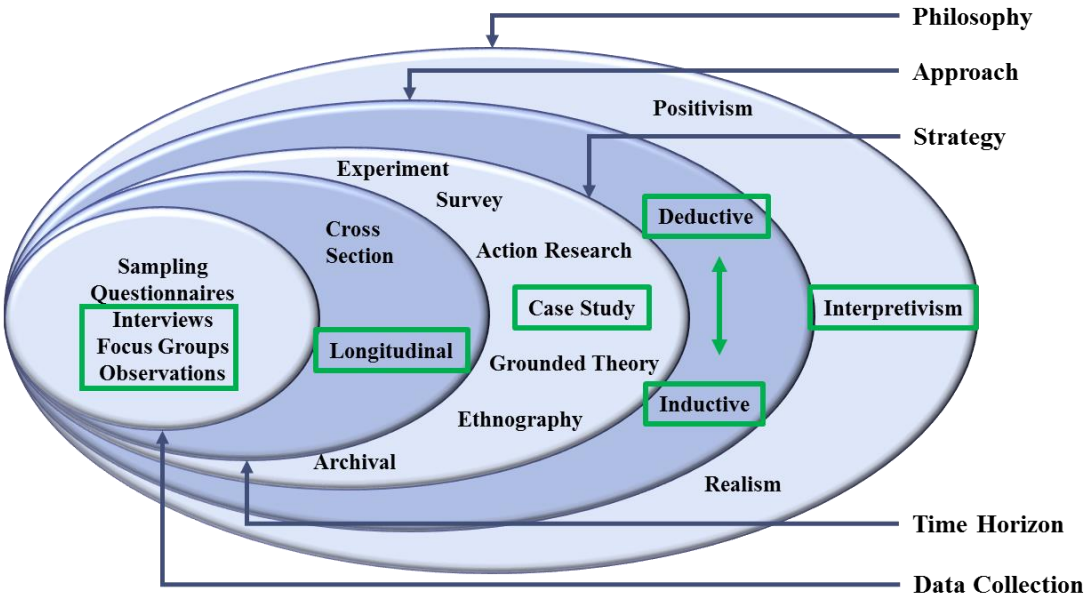


Figure 11: Adapted from Saunders *et al*., 2011.

Research Philosophy

Philosophy is an important first step as it begs the initial question "Why Research?" The reason this needs to be considered early, is that certain research methodologies may not lend themselves well to the researchers' assumptions concerning epistemology and ontology. Epistemology provides a background to what kinds of knowledge are legitimate and adequate so that the research methods and the design will work for a

given set of objectives (Gray, 2014). Easterby-Smith *et al*. (2012) suggests that when one has a knowledge of research philosophy it helps them clarify the kind of evidence being gathered and how it's going to be interpreted. Therefore the researcher is interacting with those of the study, and as such must minimise the distance between himself and these participants (Creswell, 1998). In understanding the nature of reality the researcher is concerned with ontology and the assumptions they have on how the world operates.

An interpretive approach will be chosen to address the research questions, as positivism has often been criticised from separating the researcher from the research itself failing to acknowledge the interactive process and collaborative nature of the collection of data with human beings (Hennink *et al*., 2011). The interpretive paradigm seeks to understand the "lived" experiences of the participants and there is a certain amount of subjectivity to this method. Furthermore, people's reality is socially constructed and occurs in the context of historical, cultural and personal experiences. Hennick *et al.* (2011) elaborate on this paradigm, in that they believe that you cannot study human behaviour outside the context in which they live. They also argue that people's perception of reality is subjective, and therefore there can be multiple perspectives on reality and not just a single truth.

Research Approach

The subjectivist approach is located within the interpretive paradigm. This approach tends to be anti-positivist. It can however use either inductive or deductive reasoning in that this research can begin from theory, but also allow for the fact that during data collection, patterns may emerge that can give way to new theory. In fact, they are mirrors of one another, in that inductive reasoning can produce new theory from data while the deductive process uses the data to test existing theory (Eisenhardt and Graebner, 2007). It is mainly attributed to qualitative research in that it is concerned with meanings that people derive through their experiences of the social world in which they live. In order for the researcher to understand the process, they need to study this in the persons own setting to experience first-hand what is taking place. It seeks to understand the everyday lives and delves into the world of fundamental meanings that underlie social life (Burrell and Morgan, 1979).

The research approach required to address the above objectives will be qualitative, but will use quantitative data to support the research. This researcher is attempting to explore and understand how social experiences are given meaning. Although quantitative research techniques will be used to understand the causal relationships between the three dimensions, the strategy in this case requires a much deeper analysis of the social interactions that are taking place. The qualitative approach is more conducive to the "how" and "why" type questions as we are getting an understanding of what is going on below the surface of quantitative survey type answers. In other words, the concepts need to be explored or explained in a more detailed view (Creswell, 1998). This lends itself well to the relationship between engagement theory, leadership style, autonomy and followership theory.

Choosing the Research Strategy

In choosing the correct strategy, the researcher must compare possible research techniques in order to ensure that they have the best chance of answering the research question. Considerations have been given to such methods as grounded theory, ethnography, action research and case study research. Grounded theory is based upon inductive logic and existing theories are not used. This approach may be impracticable, as this researcher has already put forward theories based upon a review of the current literature. Voss *et al*. (2002) suggested that no matter how inductive the approach, there needs to be a prior view of the general constructs we intend to study and their relationships. As a result, the grounded theory approach was rejected as a viable option in this research.

Sambrook *et al*. (2014: 172) in their analysis of researching employee engagement argued that "a more interpretivist and ethnographic angle" was needed as they believed that engagement exists within a cultural context. They used autoethnography in their research to compare the participants experiences with that of the researchers own personal perspective. This strategy is quite suited to engagement where the researcher selects from their own experience (auto) and in addition collects data from others (ethno) which are written about to understand the cultural background (graphy) (Wall, 2006). In his support of this strategy to produce research where there is intensive involvement, Watson (2011) suggests that the process can be strengthened if accompanied by interviews, the analysis of documents and even small surveys. While

this researcher can see huge benefits in an ethnographic strategy, there is the need to initiate change in the future, and although there may be some shared techniques, the researcher needs to evaluate how observation, participation and action can be achieved in their own work setting while also integrating this research with the development of new knowledge.

The action research approach was also considered. The researcher would participate in the study and could appreciate the organisational phenomena from the participants point of view (Evered and Lewis, 1981). As the name suggests, action research is based upon the principle of change. The action research process begins where a practitioner desires to change a work practice. The starting point is often prompted by a critical look at the practice and the belief that things could be done better (French, 2009). The limitation however, in the action research approach is the difficulty in achieving collaboration among the frontline operators. One of the challenges of action research within one's own organisation is the resistance to change and an intervention may evoke suspicion by employees leading them to withdraw their willingness to participate in the research. Therefore, this could be considered by frontline workers as a way to achieve alternative objectives, or a means to spread management's message throughout the organisation. It is for these reasons that an action research approach will not meet the objectives of this study and is therefore not an appropriate strategy.

Case Study Research Strategy

Case study research methods have been the preferred choice where "how" and "why" questions are been asked and provide rich in-depth information. However there are other factors to be considered in the choice of methodology. The first of these is the control the researcher has over the events taking place and their ability to manipulate the relevant behaviours of those in the study. This is a significant factor in one's choice, as the study will be exploring contemporary events and the strength of this approach is the ability to deal with a full variety of evidence (Yin, 2009).

Another key factor in choosing the case study approach is the scope of the research. In traditional research, the researcher is detached from the subject matter by a hard boundary and the system is reduced to a number of variables with the majority of others held constant. In case study research the boundaries between the phenomenon and the context of the study is not clearly evident and the researcher wants to understand this

real-life situation in depth (Yin, 2009). This is what Gummesson (2000) calls a holistic view in that instead of breaking down the study into many well defined parts, the sum of the parts in the case study approach may not equal the whole. We can only understand the overall picture by looking at all the items together.

A further key factor in the choice of research strategy is the historical background of the research participants and organisation in relation to the changes that have taken place over time to shape the current organisational culture. Being on the inside has its advantages. Insider research offers a different perspective on the organisation, as they are carried out by researchers who have a deep level of understanding in the business, and rather than neglecting this knowledge, researchers should turn familiar situations into objects of study (Riemer, 1977). Gummesson (2000) points out that an organisations history is often only used as superficial background material, instead of viewing it as a bridge to interpret both the present and the future. He was strongly in favour of a historical approach to case studies and argued that in order to fully understand the actual state of an organisation, insight into the historical issues that have taken place is required that have led it to the present situation. This is an important point in relation to the philosophical background of the research as new history is always in the process of being created.

Therefore, the case study methodology is the preferred choice for this researcher and has the most potential to meet the objectives of those reviewed. According to Yin (2009), there are a number of key points that are most suitable when choosing a case study approach as shown in the summary below.

- How and why type questions need to be answered.
- The research is based upon a contemporary set of events.
- The research has minimum control of the behaviours of the participants.
- The research is carried out in a real life context.
- Historical evidence is available on the cultural background.
- The boundaries between the phenomena are not clearly evident.
- There are many variables of interest with multiple sources of evidence.
- There is guidance of prior theoretical propositions to guide data collection.

Having decided that a Case Study method will be employed for this study, the author then faced a number of additional decisions such as which type of case study, whether to use single or multiple case studies and which organisation(s) to select for the case study.

Type of Case Study

Yin (2009) distinguished between three different types of case studies, namely explanatory, descriptive and exploratory. Explanatory case studies are mainly used to seek and explain how and why some event occurred (Yin, 2003). Within the explanation will be the causal path and this approach has close links to experimentation. The descriptive case study is a good method to describe a new product introduction, or the development of a new process or technique. This type of case study is sometimes considered the simplest form of research as it's only a matter of observing, and describing what occurred (Gummesson, 2000). In exploratory case studies, fieldwork and data collection may take place prior to agreement of the final questions. Exploratory case studies have often been perceived as a prelude to other research methods, but they can in their own right be a rigorous form of inquiry. This form of research can be both inductive and deductive. The researcher may follow a certain amount of intuition based upon pre-understanding and critics of this approach sometimes perceive this as untidy (Yin, 2003). However, the objective may be to discover new theories by observing social interactions in their rawest forms (Glaser and Strauss, 1967). The research of work engagement in relation to autonomy, leadership style and frontline participation has the most potential in an exploratory case study as there are many unknown factors related to the social and cultural dynamics and the interactions being researched are not fully understood.

Single versus Multiple Case Studies

There are a number of rationales for a single case study. These can include such factors as testing a well-formed theory, a unique case, a revelatory case or a longitudinal case at two different points of time. This research however is more suited to a typical or commonplace situation in that this manufacturing organisation is believed to be typical of other similar manufacturing firms in similar industries (Yin, 2009). The lessons to be learned should be informative about the experiences of the average frontline manufacturing operator. Of course, it may be appropriate to choose more than one case.

Multiple cases can help find patterns of data to support the original case and therefore can be considered more robust (Yin, 2009). Multiple cases can also provide support that a selected theory will fit with a number of different situations, thus getting an understanding of differences and similarities between the cases (Robson, 1993).

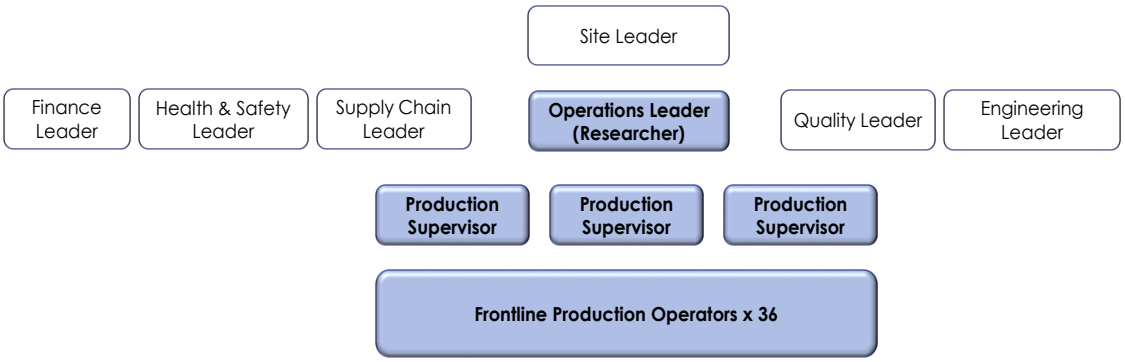
The issue of choosing more than a single case study comes down to the question of generalisability. In other words, the external validity of the study. Critics of single case studies believe that they are poor for generalising, but Yin (2009) argues that case studies rely on analytic generalisation where the objective is to generalise a set of results to a broader theory. The intent here is to achieve a deeper understanding rather than the need to be able to generalise beyond a single organisation. Woodside and Wilson. (2003) argued that the problem with large sample sizes is the failure to collect the necessary detail to gain a deep understanding in the process examined. However there is the need to ensure that this theory can be tested further across a second or third similar industry. In deciding upon the ideal number of case studies, Voss *et al*. (2002) suggested that the fewer the case studies, the more opportunity there was for real depth of observation. There is also the opportunity to study several contexts within the one case study. It is for these reasons that a single case study is the preferred option, ensuring a greater level of depth and richness of data.

Choice of Case Study Organisation

A single case study will be carried out in the researchers' place of employment. This will be both a convenience and purposive sample in that the participants are all members of the organisation, and rather than relying solely on a convenience sample only these participants will reflect the diversity and as such highlight subtle but important differences (Barbour, 2001). Honeywell Aerospace began operations in Waterford in 1986. Initially the company was called Garrett Forging and Machining and then became Allied Signal Aerospace in 1991. It became part of the Honeywell Cooperation in 1999. The company is a manufacturing operation, producing airfoils and fanblades for aerospace engines. It is part of the Honeywell Integrated Supply Chain (ISC), where all manufactured product is shipped to the US for direct engine assembly. The plant operates to stringent aerospace standards and procedures, and as expected with the aerospace sector, quality is paramount.

There is a total of seventy-six employees in the organisation with thirty-six frontline production operators. Each production job requires a specific training plan to acquire the skills needed. Cross-training is provided based upon the product mix required from the customer and the introduction of new products and processes. There is very little employee turnover and as a result the production group are quite experienced. The average tenure of this group is 21 years of service, with an average employee age of 49 years. The production process is a repetitive cycle and parts follow the same flow each shift. All production operators are members of the Technical Engineering and Electrical Union (TEEU).

Figure 12: Honeywell Aerospace Waterford Organisational Structure



The Researcher

When researching one's own organisation, it is important to point out that there are huge benefits to be had from what Gummesson (2000: 57) calls "pre-understanding". This refers to the knowledge, the experience and insights people have in their own place of work before they begin their research. It's beneficial to be familiar with the everyday jargon and issues that occur in work (Coghlan, 2007). The insider can also observe what goes on and have access to various forms of information without others being necessarily aware of their presence. Pre-understanding requires more than just knowledge of operations and production, but how the "softer" elements work in relation to the social systems and the ingrained culture that exists. This may not be easy to understand due to the tacit nature of these social interactions, but having daily access to them has its benefits. One such benefit is that the observer already has a good insight to these problems. Having a good insight into these perceived problems can bring with it researcher bias. However, researcher bias does not need to be a burden and should not be avoided, but acknowledged and documented so that it can be tested during the

data collection and analysis phase (Richards, 2009). As a method to test ones' own tolerance for contrary findings preliminary data shared among two or three colleagues can produce alternative explanations and therefore the likelihood for bias can be reduced (Yin, 2009).

This researcher has built up over twenty-four years of working with frontline production workers in various manufacturing environments. In line with the theoretical background of this paper, this insider knowledge has led this author to observe low levels of what can be described as work engagement on the shop floor. This includes both on the job work tasks and associated functions of the job such as daily team meeting interaction and participation. This information comes from various forms such as observation, daily interactions with staff and frontline workers, feedback and performance metrics. Although the theory of work engagement has shown in many case studies the key factors related for ones level of engagement in their work, it was important for this researcher to understand these dynamics inside one's own workplace. Although this researcher has the benefit of observing engagement levels in various manufacturing operations, the fact that they now have the opportunity to explore these concepts further in their current organisation has many benefits.

Scope of the Study

It is important to come up with a strategy for participant selection. Two methods are more applicable in this case study. The first one is convenience sampling, and is based upon recruiting participants that are easily accessible. A second type and probably more appropriate is the purposive sampling choice. This method is mainly used in focus group discussions and in-depth interviews as the researcher purposively selects the participants based upon their ability to be in a better position to answer the questions. Purposive sampling is also used in extreme cases where prior knowledge or through personal experience the researcher already has information on the case (Gobo, 2004). Whether through previous research, or first-hand observational information this knowledge can be very useful in selecting participants who show behaviours of being on either end of the engagement continuum. Creswell (1998) takes the view that although multiple strategies may be used in selecting case study participants, selecting unusual cases and employing maximum variation is a good way to achieve multiple perspectives and as such get a deep understanding of the phenomenon taking place.

The researcher should not ignore prior knowledge and therefore must carefully select participants that have the most potential to meet the criteria in understanding both ends of the continuum. During this selection phase, researcher bias will need careful consideration. Although purposive sampling is the researchers judgement, it must be matched with the objectives of the case study, and therefore prior knowledge cannot be ignored (Robson, 1993).

Case Study Research Methods

The ability to use multiple sources of evidence ensures there is convergence among the data collected, with a formal database to ensure there is a clear chain of evidence (Yin, 2009). Although "hard data" may support the research, such as production metrics, the majority of the data required through this process will be classed as "soft" data. This will be mainly gathered through direct and participant observations, semi-structured interviews, focus groups and the use of a researcher diary. It will also be relevant to gather historical information including engagement surveys, and other types of communications to assess the cultural background of the organisation. The above multiple methods to collect data has the advantage of converging lines of inquiry a process known as data triangulation (Yin, 2009). Yin elaborates on this process, indicating that any findings from several sources of information is more convincing following this type of corroboratory approach.

Archival Records / Surveys

There are many forms of data that can inform us of the cultural and social interactions that have taken place both historically and currently. These include the use of internal communications, e-mails and announcements. Internal metrics in a production environment can also provide good data on engagement levels. Reviewing an organisations internal documentation provides insight into their culture (Kelliher, 2005). Engagement surveys are used annually by organisations to obtain objective data on employee perceptions. Although this study is mainly qualitative, the researcher believes there is the need to get an insight into just where on the engagement scale the frontline worker is, and this data will be beneficial in developing the semi-structured interview templates to be used during the interview stage. It will also provide a basis for developing the format and templates for the focus group stage of the research.

In-depth Interviews

This type of interview is often referred to as a conversation with a purpose (Hennink *et al.,* 2011). The interview would be classed as a semi-structured interview where the interviewer has a set of pre-defined questions related to the topic in hand, but is an open ended approach that motivates the interviewee to share their experiences. Although the format needs to be guided, it should not be over structured as strict adherence to prepared questions can impede getting the best information (Stuart *et al*., 2002). Typically they encourage conversation and are well suited to case studies in that they identify how people make decisions, get to the source of perceptions and beliefs and provide meaning that people attach to their own individual experiences. Trust is a key ingredient in this process. The researcher needs to operate on two levels, the first ensuring that the needs of the line of enquiry are met while also questioning in a friendly and nonthreatening style (Yin, 2009).

Focus Groups

Focus groups can be an ideal way to collect a range of views on a single topic. They are usually conducted in an interactive discussion between six and eight people. They are ideal for generating new ideas within a social context (Breen, 2006). More insights into the research issues can be discussed than single interviews due to multiple participation in a single setting. However the environment needs to be conducive to those expressing their own views. This type of data collection can have an advantage over single interviews, as participants may have opposing beliefs that encourages justification of views and therefore further elaboration on the topic. This method can be beneficial in exploratory type research where the issues are unclear. It can also get an understanding of the behaviours between the group members, and this may add further data to the research, especially in terms of how participants influence one another (Brown, 2015). Focus groups have a normalising effect, as extreme views can be challenged and require justification.

Observations

Observation is often combined with other qualitative methods in order to provide complementary data. This method allows the researcher to see what people do and say within their own cultural settings. Observation can provide contextual understanding to findings of other techniques especially silent social norms and values (Hennink *et*

al., 2011). Frontline production work is "hands-on" and as such one can see the level of engagement in terms of output, productivity, and performance while working. Observation can support interview and focus group data, as what people perceive what they do and what they actually do can be quite different (Mulhall, 2002). Although observing participants in their own work settings can bring with it a change in behaviour, in this case study the researcher is an insider and spends considerable amounts of time in production and therefore would not disturb the normal course of events taking place. The opportunity to use participant observation will also add more context to the study where the researcher participates in team meetings, problem solving teams and general discussions with employees during the working day.

Reflective Diary

Observing the social dynamics that take place between co-workers, supervisors and support staff will be important for leadership style and followership data. A field diary may also provide the researcher ways to record their own thoughts and interpretations as qualitative research is very much a reflective process that can allow for emerging ideas. There are a variety of influences that impact upon these interpretations, as the research itself is a social encounter and therefore important to record thoughts and feelings on how the research is progressing (Nadin and Cassell, 2006). The reflective diary will be maintained by the researcher only throughout the data collection phase of the research. The content will focus mainly on observational data collected during informal interactions with those of the organisation.

Research Objectives and Data Collection

Table 5 below links the research objectives with the data collection techniques. Although this research is mainly a qualitative case study, one needs to consider a mix of quantitative methods in order to provide multiple sources of evidence. Stage 1 is a quantitative survey that aims to get an understanding of the current engagement levels of the frontline production workers. In order to protect against bias, the administration will be supervised by the Training Supervisor who historically supports this type of activity in the organisation.

Semi-structured interview templates will be developed based upon the objectives, but also adjusted in line with the outcome of stage 1. In order to address bias of the interview process, once the semi-structured questionnaire has been developed it will be

tested on a sample of two individuals not involved in the study itself. This will address the practicality of the interview process itself and also to verify the questions are dealing with the objectives themselves. The recording of interviews will be sought from the participants involved and these interviews will be transcribed into NVivo 11 once completed.

Table 5: Research Objectives and Data Collection Techniques

Objective	Method	Description	Participants
STAGE 1			
(1) Assess current engagement levels among frontline workers.	Survey	Develop and conduct an engagement survey among all frontline production operators to obtain an overview of current work engagement levels in the organisation.	All Frontline Manufacturing Operators.
STAGE 2			
(2) Explore the impact the current leadership style has on frontline workers engagement levels.	Semi-Structured Interviews	Develop and conduct interviews among frontline operators, supervisors and managers in relation to leadership style and impact on engagement.	15 Frontline Manufacturing Operators. 3 Production Supervisors 2 Leadership Team Members
(3) Explore the frontline operators' role as "followers" in participating with the organisation	Semi-Structured Interviews	Develop and conduct interviews among frontline operators, supervisors and managers in relation to the role of followership and the impact it has on work engagement.	
(4) Explore the level of autonomy the frontline worker has and how it influences work engagement	Semi-Structured Interviews	Develop and conduct interviews among frontline operators, supervisors and managers in relation to the control one has over their own work.	
STAGE 3			
(5) Analyse the interrelationships that exist between leadership style, followership and autonomy, including reflection on individual and group behaviour.	Focus Groups	Group discussions among front line operators on the three factors of work engagement. Discuss how these three factors influence the frontline workers level of engagement. Include also general field notes from all participants involved in the research process.	2 groups of 6 frontline manufacturing operators.

Data Analysis

The analysis of data is one of the most important steps in the research process. There are many statistical techniques available for those who use quantitative research methods. There are also many different techniques for analysing qualitative data, yet most researchers are unaware of the many choices available to them (Leech and Onwuegbuzie, 2007). It is important to increase triangulation not only by utilising many different data collection tools mentioned earlier, but also by using many different data analysis tools.

With little focus on analysis, the majority of researchers believe that "constant comparative analysis" (Glaser and Strauss, 1967) is the only way to analyse qualitative data (Leech and Onwuegbuzie, 2007). That been said, after reviewing various techniques, including keywords-in-context, word count, classical content analysis, domain analysis, taxonomic analysis, and componential analysis, the researcher believes that constant comparative analysis is an extremely powerful set of tools for finding themes in textual data and is an ideal method for the analysis of a journal or diary. The inductive process identifies categories and relationships within a vast amount of data, and it doesn't require the use of any particular unit of analysis (Goetz and LeCompte, 1981).

The identification of themes is fundamental in qualitative research (Ryan and Bernard, 2003). This involves several tasks, including finding themes and sub-themes in the data also known as thematic analysis. Many different expressions are used to link themes to the data, including categories, codes, segments, units, chunks etc., but the important part of this process is reading and re-reading the data again to identify the themes. A critical part of the constant comparison method is searching for similarities and differences by making systematic comparisons across units of data. Ask the question, what is this sentence about? There are three main stages to constant comparison analysis (Leech and Onwuegbuzie, 2008).

1. Open Coding: Piece the data into similar segments and code
2. Axial Coding: Group the codes into similar categories
3. Selective Coding: Integrate and refine (create theory out of data)

The data gathered needs to be simplified down. This reduction in data is not separate from the analysis but part of the process that sorts, focuses, organises and discards data so that final conclusions can be verified (Miles and Huberman, 1984). The reduction in data can be completed in many ways, and this researcher intends utilising NVivo 11 software for initial and final coding of data. Although there is no simple method to ensure the conclusions are credible, the task in hand is to return to the data again and again to ensure that the categories, codes, explanations and interpretations make sense (Patton, 1999).

Challenges for Case Study Research

While there are many advantages to a case study approach, the limitations can arise out of what Eisenhardt (1989) eludes to the over complexity of empirical evidence that results from multiple volumes of rich data. Although this can be rich in detail, it can lack simplicity. The researcher can get lost in the excessive content as they do not have the quantitative tools to summarise the data. NVivio 11 however, in recent revisions has helped to counteract this deficiency. The most beneficial part of this application is the ability to visualise the emerging themes and through the hierarchical node structure it becomes much easier to see and understand relationships, especially when comparing interview transcripts to the base literature. It is important however not to rely on the software to do everything, as it's not intended to replace the researcher, but to increase the efficiency of the process (Leech and Onwuegbuzie, 2011). Doing much of the analysis by hand allows the researcher to grasp a better understanding of the concepts and patterns that can emerge from the data.

The quality of the research methodology may be judged according to four common tests. These are construct validity, internal validity, external validity and reliability. Construct validity is the extent that we are actually measuring the concepts under research. Case studies are often criticised for failing to develop a sufficient set of measures, or the measures used are too subjective (Yin, 2009). There are two significant ways to improve the construct validity, and both need to be considered during the early stage of the research methodology. The first is the establishment of a clear chain of evidence so that the reader can fully understand how the researcher went from initial questions to final conclusion. Secondly the researcher needs to use many different ways to look at the same phenomenon (Gibbert *et al.,* 2008).

Internal validity seeks to establish a link between the causal relationship in terms of certain conditions leading to other conditions and not some spurious relationship. Internal validity is more associated with explanatory research in that the researcher is trying to show how and why one event led to another. In exploratory research this would not be as relevant. That said, there does need to be a thorough review of the data to ensure all explanations and evidence have been considered in order to ensure that rival explanations are not the cause.

External validity is sometimes called generalisation, and this test is a significant issue when carrying out a single case study. An important part of the process is the ability to carry out the same study in another similar organisation and achieve the same result. This is the major criticism in single case studies. The main limitation of case study research within one's own organisation is that it is difficult to generalise the findings. It could be argued that the data representation is poor as it is focused on one site only and therefore is case specific and cannot be spread across a range of sites (French, 2009). Therefore, the researcher needs to be aware of not making universal claims. That been said, it is practice driven and small-scale focused, and therefore it shouldn't lose anything by way of rigour. However, one can expect to gain deep insights into the perceptions of one group, and this should be a good representation of the frontline employee.

Reliability refers to the ability for the research to come to the same conclusion if carried out by another researcher using the same procedures. The objective here is to avoid errors and biases in the study. This is a significant limitation when carrying out research in one's own organisation as the researcher will have built up pre-conceived ideas that may be difficult to ignore. Due to time constraints and resource availability it is not practical to have a second researcher repeat the procedure. There is however one way to improve the reliability problem and it relates to making as many steps as operational as possible, so that if we needed to retrace our steps it would be possible for an auditor to do so (Yin, 2009). Putting together a case study protocol and database in the early stages of development will aid this process and also allow for ease of retrieval of records at a later stage if warranted to check for reliability. To address any inherent bias the researcher will also use a small peer review team consisting of HR representatives and the researchers supervisors that are not directly involved in the research itself, but have

an insight into the theories being explored and will challenge the researchers thought process during the analysis and findings stages.

Ethical Considerations

This case study research will be based on participation, freedom and democracy and as such needs a thorough examination of how ethical issues will be addressed. This is especially true as participants need to be treated as human beings and not just a set of variables (Coghlan and Brannick, 2014). Although the researcher in this case is the participants' manager, it is possible to eliminate this barrier for research success. One of the first hurdles to overcome is the aspect of role duality. This will involve the normal day to day operational activities where productivity, quality and other metrics must be met, while also partaking in this research. A key feature of this model of research is that all participants are treated equally with no hierarchy existing between the researcher and the participants (French, 2009). As the organisation is hierarchical in nature, the biggest challenge will be the ability for the researcher and participants to work together on a level playing field. There is always the problem of the hierarchical relationship within the organisation. It is this actual barrier that we are attempting to break down, and therefore it in itself can become a problem, and must be managed carefully throughout the process.

According to Williamson and Prosser (2002), there are three ethical questions that need to be carefully analysed prior to commencing ones research. The first relates to confidentiality and anonymity, as it will be difficult to fully protect individual's identity due to close participation where others will be able to identify who said what. This is especially the case in a focus group setting. The second issue relates to the fact that the data emerges in real time and therefore how can one know what they are consenting to? The third issue and probably the most important one for this researcher is the political element where the participants could be harmed by the material they divulge. This needs to be addressed through an ethical code at the beginning of the process, and it must be assured that the findings that occur are also "owned" by the participants as much as the researcher.

In researching one's own organisation there will be significant barriers in relation to managing the political and power relationships among participants, peers and management in general. Case study research can be considered to be "subversive" in

nature as it examines everything! It endorses democratic participation and this in itself may threaten current organisational norms, and this can be even more significant in organisations who have a strong hierarchical control culture (Coghlan and Brannick, 2014). This may endanger the researcher's role from all sides. The inside researcher may be viewed by some as an "informer". Cooklin (1999) refers to the insider as one who, in supporting the people of the organisation is questioning the organisations beliefs. The researcher may be trying to facilitate free and informed choice, but in doing so can find that what evolves is intensely politically and may be viewed as damaging for the organisation.

Although political organisational tensions may need to be considered, this does not mean the researcher should shy away from addressing early in the research. Being on the inside, one has the knowledge of the power structures that exist. As such, there is the need to be well prepared in managing these power structures. This is what Buchanan and Badham (2008) refer to as the political entrepreneur, with a dual role of building participation as a change agent while also gaining support to reduce resistance. Roth *et al*. (2007) came up with strategies to deal with the political landscape. These included such items as knowing how to get things done and ensuring that the first actions taken impact a wide range of the members of the organisation, and most importantly finding the right stakeholders and sponsors.

Reporting findings from inside your own organisation offer many ethical issues including both company confidential information and personal confidentiality, plus potential embarrassing information where the researcher may need to go further to remove any details that could identify the persons involved (Coghlan and Brannick, 2014). This will be especially important where the nature of this topic of work engagement is quite sensitive, and one where the participants of the study may find it difficult to share information especially in relation to their own work attitudes.

Being an inside researcher also brings with it a pre-understanding of the way things work around here. Being familiar with the current situation may not always be positive as it brings with it a historical bias and has the ability to skew the findings (Coghlan *et al*., 2014). One needs to be aware that their potential feedback may be interpreted personally, and a danger that the participants themselves may not want to share all

relevant information due to both the sensitive nature of it and also the researchers position in the organisational hierarchy.

Conclusion and Next Steps

Very few research studies on work engagement have used qualitative methods since Kahn's ethnographic study in 1990. The literature continues to be dominated by quantitative surveys. Saks (2014) argues that this is a major shortcoming and future research should base their conceptualisation on a more meaningful and practical approach. The case study research approach is more suited to the complex and sensitive nature of employee engagement. Three interrelated factors of work engagement among frontline workers have been identified. Through an exploratory case study, this methodology has the potential to uncover rich aspects for the reasons why frontline workers choose to either engage or disengage in their daily work.

The next steps of the process will assess the current engagement levels among frontline workers. This will be followed by participant selection for the qualitative phases and the design of the interview questions. Timing and ethical requirements will be scoped out in preparation for the initial interviews. Interviews will start with the perceptions of supervisors and managers. Initial findings will then allow for the interview questions to be modified for the production operator groupings and focus groups.

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Paper 3: Design and Initial Findings

Preface to Paper 3

It was proposed that multiple forms of evidence gathering would take place during the research, including interviews, observations and focus groups. However, during further feedback, it was proposed that the scope of the research methods used to collect data needed to be refined down. It was believed that the amount of research techniques proposed was not achievable due to the overall research deadline. It was considered that the use of many different techniques would dilute the impact of exploring deep held thoughts and opinions on the reasons why those on the frontline chose to engage or disengage with the organisation. As a result, more emphasis was placed on the interview process.

The Initial Work Engagement Survey

Also, at this point of the study, it was agreed that while this was an exploratory study, there was a need to understand the current attitudes held on work engagement, and therefore a quantitative work engagement survey was agreed upon. Although there was an internal annual survey (Honeywell - Positive Employee Relationships (PER)) conducted by the organisation that collected data on work engagement, and this could be used as initial evidence, it appeared to be impacted by self-reporting bias and organisational leader board influences. The use of a questionnaire with all the frontline workers of the organisation was achievable and could aid the development of the semi-structured interviews that would account for the greater part of the research.

Participant Groupings

The research was to be conducted with two specific participant groups. Group one was the frontline workers and group two was the managers and supervisors of the organisation. At the end of paper two, during feedback it was deemed more appropriate to obtain the opinions of the supervisors and managers first. The design of paper three could focus on the link between the results of the initial work engagement survey, and the opinions from the managers and supervisors. This would have the added benefit of combining both sets of information prior to interviewing the production operators themselves. These initial findings from stage one could provide improved probing questions that had the ability to achieve deeply held thoughts on work engagement.

RESEARCH PAPER SERIES

PAPER 3 - DESIGN AND INITIAL FINDINGS

"Exploring work engagement of the frontline manufacturing sector:

A case study approach"

Abstract

This is an exploratory case study designed to achieve a deeper understanding on frontline work engagement in a single organisation using numerous data collection techniques. Both quantitative and qualitative research methods are utilised. As this case study is taking place in a single site, employees from various levels and departments of the organisation were asked to participate. Obtaining a selection of opinions on frontline engagement can facilitate a much deeper understanding of the factors that influence the levels of work engagement in the organisation. The overall objective of this research is to explore the factors related to the engagement or disengagement of the frontline worker, with emphases on the influences that offer improvements for the future.

Initially a work engagement survey was designed and conducted with the participation of all frontline production operators. They were asked for their opinions relating to their willingness to engage with the organisation based upon their intrinsic motivation, the autonomy they have and their perception of the organisation in terms of personal support. Findings from stage one were summarised in preparation for stage two. In stage two, semi-structured interviews were designed and conducted with the managers and supervisors of the organisation. These interviews used both the conceptual framework, and the initial findings from the production operator engagement survey results to explore three components of engagement. These are Leadership Style, Followership and Autonomy. Using thematic analysis, the results were categorised and coded to get an overview of the engagement levels as perceived by managers and supervisors. These themes are discussed in preparation for the next stage of the case study.

Introduction

This case study research currently underway in Honeywell Aerospace Waterford explores the engagement of the frontline manufacturing operators. Honeywell is a diversified technology and manufacturing company with a global workforce of over 130,000 employees across 95 countries. Honeywell Aerospace Waterford is a manufacturing operation, producing compressor blades and fanblades used in the assembly of military and commercial aircraft engines. The organisation has manufactured these products in its current location for the past thirty years. The site is part of an integrated supply chain transferring finished components to the USA for final engine assembly. It is a medium sized operation with a workforce of eighty employees. The operation is a highly-controlled process in precision forging, automated machining and specialised metal finishing and final inspection.

The overall aim of this research is to explore the factors that cause a frontline manufacturing operator to either engage or disengage in their work. There are four objectives to be addressed.

Stage 1. Assess current engagement levels as perceived by the frontline operators in relation to intrinsic work motivation, autonomy, and organisational support.

Stage 2. Explore leadership style, followership and autonomy by the managers and supervisors of the organisation in relation to the engagement of the frontline operator.

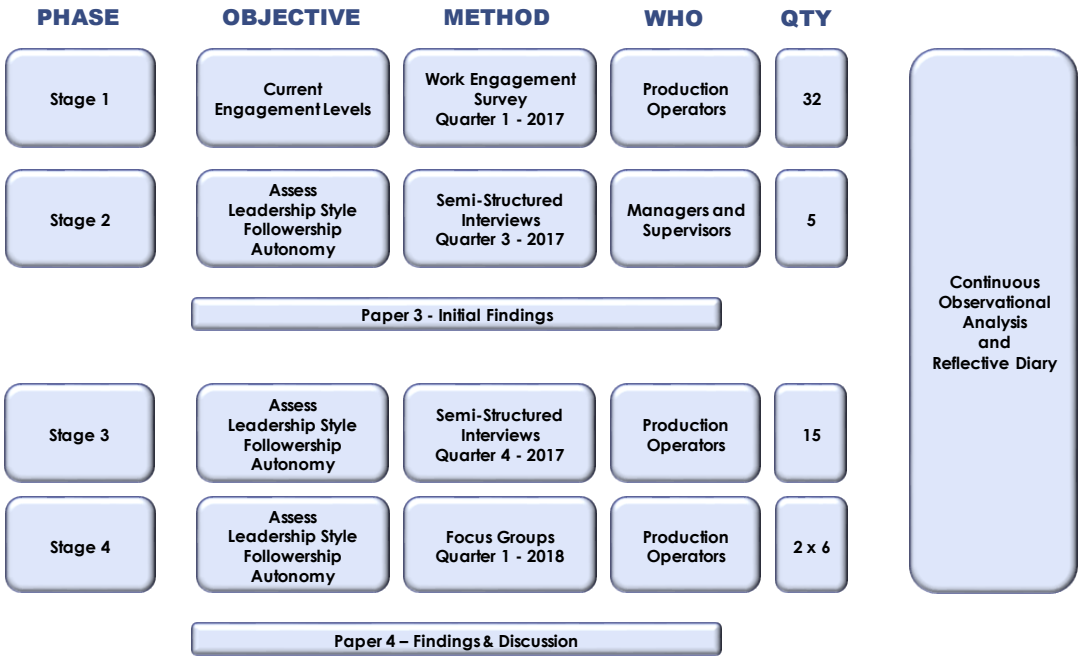
Stage 3. Explore leadership style, followership and autonomy as perceived by the frontline operators on their willingness to give extra discretionary effort in their work.

Stage 4. Analyse the interrelationships that exist between leadership style, followership and autonomy in achieving increased levels of work engagement in the organisation.

This paper will outline how data will be collected, analysed and report on initial findings. Previous data on Honeywell employee surveys related to employee engagement and the associated limitations are discussed. Stage one of the design looks at the current engagement levels in the organisation through a new quantitative survey of all manufacturing production operators. Stage two uses semi-structured interview guides with the managers and supervisors of the organisation to get their opinions on the engagement of production operators. These findings are then summarised in

preparation for stage three and four that will form the main body of the next paper. Figure 13 below outlines each stage of this case study research.

Figure 13: Design and Initial Findings Overview



Positive Employee Relations (PER)

Employee engagement is realised by the organisation as a key competitive advantage, and behaviours to improve engagement are encouraged at all levels. There is currently no method used to measure whether employees are engaged or disengaged in their work. Within Honeywell, all employees complete a "Positive Employee Relations" (PER) survey every year. Although the PER survey does not specifically target work engagement, it is designed to address the engagement concept through several related questions. There are twenty one questions that cover a range of issues from safety, "My workplace is safe" to pay "My benefits package is competitive". Questions relating to engagement include such items as; "My manager listens to me and responds to my issues". These surveys are designed to get the opinions of employees across the entire organisation. The majority of questions specify an answer referring to "My Manager" and therefore is seeking survey answers as to this relationship. Survey answers are calculated on a four point Likert scale with no neutral position. The mean of these percentiles are then used to get an overall score. The PER survey questions can be observed in Appendix 1 of this paper, and the average scores from the Waterford employees taken over the previous six years are shown in Table 6 below.

Table 6: Positive Employee Relations (PER) Waterford

Year	2012	2013	2014	2015	2016	2017
Score	76%	77%	83%	88%	80%	81%

The positive results above indicate that the average employee in Honeywell Waterford is satisfied with their general working environment. Although this is a positive outcome, it does bring into focus why one would believe there is a problem with work engagement on the factory floor. There are however some limitations to this annual PER survey. Number one, the results are grouped together, and as such, one cannot see how the frontline employees surveyed. Secondly, the majority of questions focus on the employees' direct manager, and for a frontline operator this can be misleading when rotating through shifts and reporting both directly and indirectly to various supervisors and managers. The third point and possibly the most significant is the inherent bias built into the process due to the nature of organisational league tables. In other words, it's not good to score negatively for the organisation, as results may have a bearing on potential future business. It was pointed out by employees during a feedback session that this annual survey may be subject to internal self-reporting bias due to the pressure of a positive result. This social desirability bias may be influenced by potential future opportunities, and the fact that sites in the bottom half of "league tables" get quite an amount of focus and publicity.

Stage 1 – Work Engagement Survey

The main reason why this research is being conducted in the first place is because the author believes that there are low levels of work engagement in manufacturing and wants to explore the reasons for this, and look at possible solutions to address it in the future. This is not reflected in the PER surveys above, and basically, we have no objective method to reflect the current levels of engagement in manufacturing. During the initial development of the conceptual framework from the engagement literature, there were several factors that had a direct impact on the frontline workers' choices when deciding to engage or disengage in their work.

Survey Design

When designing the survey, it was considered necessary to choose questions that were relevant to those working in frontline manufacturing positions, and word them in a manner that was associated with the type of work performed by production operators. Job standardisation was an important factor due to the current working environment. The objective of this survey was to focus on the related concepts of work engagement in the context of those elements that were perceived to be important for choice and discretionary effort, but also behaviours that could be changed in the future to improve the current situation. These were based upon the feelings, values, choices and control one has in their daily work tasks. It relates to both themselves, in terms of their own decision to engage or disengage, and the influential factors coming from the organisation in terms of support and empowerment. A quantitative engagement survey was the tool of choice to gather this data. Table 7 below identifies the source authors for this survey. The survey itself was broken down into four areas and all 28 questions can be viewed in Appendix 2 of this paper.

Table 7: Survey Questionnaire Items and Literature Source

Question	**Author**	**Questionnaire Section**
1 - 2	Dysvik *et al*., (2013)	Intrinsic Work Motivation (5 Questions)
3	Tremblay *et al*., (2009)	
4 - 5	Hackman and Oldham, (1976)	
6 - 11	Rich *et al*., (2010)	Work Engagement (6 Questions)
12 - 16	Breaugh, (1999)	Job Autonomy (8 Questions)
17 - 19	Morgeson and Humphrey, (2006)	
20 - 21	Kalshoven *et al*., (2011)	Organisational Support (9 Questions)
22 - 24	Parfyonova, (2009)	
25 - 26	Buckinham and Coffman, (1999)	
27	Parfyonova, (2009)	
28	Van Dierendonck and Nuijten, (2011)	

Intrinsic Work Motivation

Intrinsic work motivation was included to explore whether the frontline workers found their current job tasks enjoyable and interesting. It was argued by Deci and Ryan (2000) that intrinsically motivated employees have higher commitment and work harder than extrinsic rewards or punishment. Gagne and Deci (2005) confirmed that intrinsic work motivation explained the difference between autonomous and controlled motivation. Dysvik *et al*. (2013) linked intrinsic work motivation to work engagement, arguing that there will be higher levels of work engagement when one performs tasks based upon their own satisfaction versus feeling pressurised by external sources. Tremblay *et al*. (2009) believed that self-determination theory (SDT) was a more practical and flexible tool to measure intrinsic work motivation and more suited to rapidly changing organisational environments. Manufacturing production roles can be quite repetitive, making the same parts every day, and this monotony may feed into ones intrinsic motivation. This however can be off-set by the task significance, and manufacturing aerospace parts may provide a certain amount of inherent pride in the job itself (Hackman and Oldham, 1980).

Work Engagement

Work Engagement questions were included to get an understanding as to the current perception of the frontline tasks in terms of their investment of "hands, head & heart" in their job performance (Ashforth and Humphrey, 1995: 110). These measures were deemed appropriate as they provide a more comprehensive understanding of physical, cognitive and emotional labours more suited to the manufacturing industry. Kahn (1990) argued that people exhibit engagement when they become physically involved in tasks and are emotionally connected to their work. Rich *et al*. (2010) used a survey of eighteen questions to test Kahn's theory on engagement and their findings suggested that the investment of the employees complete self into the role provided for a more comprehensive explanation between performance and work engagement. This survey will use six of these eighteen questions, targeting energy, pride, and enthusiasm.

Job Autonomy

Job autonomy is considered a significant factor in the engagement of workers (Saks, 2006). Deci and Ryan (1987) linked autonomy to intrinsic motivation, providing greater interest, less pressure, a more positive environment, plus greater trust and higher

self-esteem among employees. The Job Characteristics Model (JCM) based upon the work of Hackman and Oldham (1976) identified five core characteristics that increase individual engagement. They are skill variety, task identity, task significance, autonomy and feedback. In relation to choice and work discretion, autonomy is the degree that an individual has control over their own work. Initially autonomy reflected the amount of freedom and independence workers had in performing their tasks (Hackman and Oldham, 1976). Later this extended to the discretion in the scheduling of work activities, how work is sequenced and the methods used to perform the tasks (Breaugh, 1999). Morgeson and Humphrey, (2006) went a step further by broadening the focus to include motivational, social and work context aspects of work. These questions were deemed suitable for the manufacturing frontline roles where job standardisation and process control is considered heavily structured and may not be conducive to the individual having control over their own job.

Organisational Support

This relates to the perception the frontline worker has on how the organisation in general treats its workers. These questions are very much humanistic in nature, and carefully designed to explore how they perceive the organisation in terms of feelings, fairness, recognition and generally feeling valued. It was important that these questions did not address their direct supervisor, but the organisation in general. The reason for this is that the direct operators have numerous interactions with various members of the organisation, and this section aims to understand how they feel about the organisation as a whole and not an individual within it. The research aims to explore the link between the worker and organisation, and this has been associated with Social Exchange Theory in the past (Cropanzano and Mitchell, 2005). This relationship is built on mutual commitments where resources that are received from others have higher value when based upon discretionary choice versus rules and procedures.

Ethical Consideration for the Engagement Survey

The total number of frontline production operators working in the organisation is thirty-six. The use of surveys as a tool to measure various concepts within the organisation is quite common and therefore the full population could be included at the outset. Due to the size of the organisation, it was deemed suitable to get all opinions from this group, as there would be little or no extra administration involved. Including all production

operators would also benefit the research later when volunteers would be sought for the interview stages.

Although several frontline operators were aware that the researcher, as a member of the organisation was undertaking a research project, up to this point they had not been made aware as to the content and proposed methodology. This was the first time the subject matter was shared with them and their participation requested. This first step in getting support for the research was critical as to its success or failure. If employee support for the research was not achieved at this stage, then it would be difficult to proceed further using the proposed methodology. In this case, being the Operations Manager would bring with it a certain scepticism or suspicion that there was an ulterior motive behind this research (Coughlan and Coghlan, 2002). The initial trust between the frontline operators would determine if the relationship was strong enough to carry out research in one's own organisation. The research also required the backing of management both internally and the support of the organisations human resources department.

Once the final draft of the questionnaire was drawn up it was approved by the research supervisors and ethical approval was granted by WIT. It was then shared with, and approved by the HR senior business partners and the organisations senior management. As the production group are all members of the Technical Engineering and Electrical Union (TEEU), a meeting was held with the shop stewards to get their approval and backing to do this survey. This was an important step, as the production members would expect that this type of approval take place to avoid any misrepresentations among their members. In order to fully explain the background, objectives and proposed research approach, meetings were arranged with each department, keeping the number of production operators between five and six so that those involved had the opportunity to discuss and ask questions. Excerpts of the survey were shared to give a sense of what was being sought, and the overall context of the survey was explained. Although the frontline workers union had approved the survey, it was emphasised that this survey was entirely voluntary. Planned timings for each group were agreed and questions noted. The engagement survey was planned over four sessions. Prior to the survey taking place, the participants were furnished with an information sheet giving them the details of the engagement survey and this can be observed in Appendix 3. Although moving through the preliminary steps of approval, acceptance and initial planning for the engagement survey was quite slow and laborious, it was time well

spent in gaining credibility from the group. It was emphasised that following the survey stage, subsequent interviews and focus groups would follow later in the year.

Stage 1 – Work Engagement Findings

To avoid any internal bias during the survey is was coordinated by the organisations training officer, who routinely conducts various forms of training, communication and facilitation with all employees. All production operators present on the day attended for the survey and all participated. A total of 32 production operators were in attendance that day giving a total operator participation of 89 percent. There were no incomplete or spoiled surveys. All data was inputted into the statistical package SPSS version 22, and the analysis sub-divided the four categories. Summated results for the four categories were averaged to get an overall score. All scoring above 3 were deemed positive and all scores below 3 were deemed negative. Summated results can be seen in Table 8 below with score averages from all 28 questions shown in appendix 4. An initial question on the survey sought the department the operator worked in, (Forge, Machining or Final Process) but the analysis of the results did not show any significant difference between these groupings. Each of the four concepts measured are also graphed below, to visually see the trends, and analysed as part of the initial survey findings.

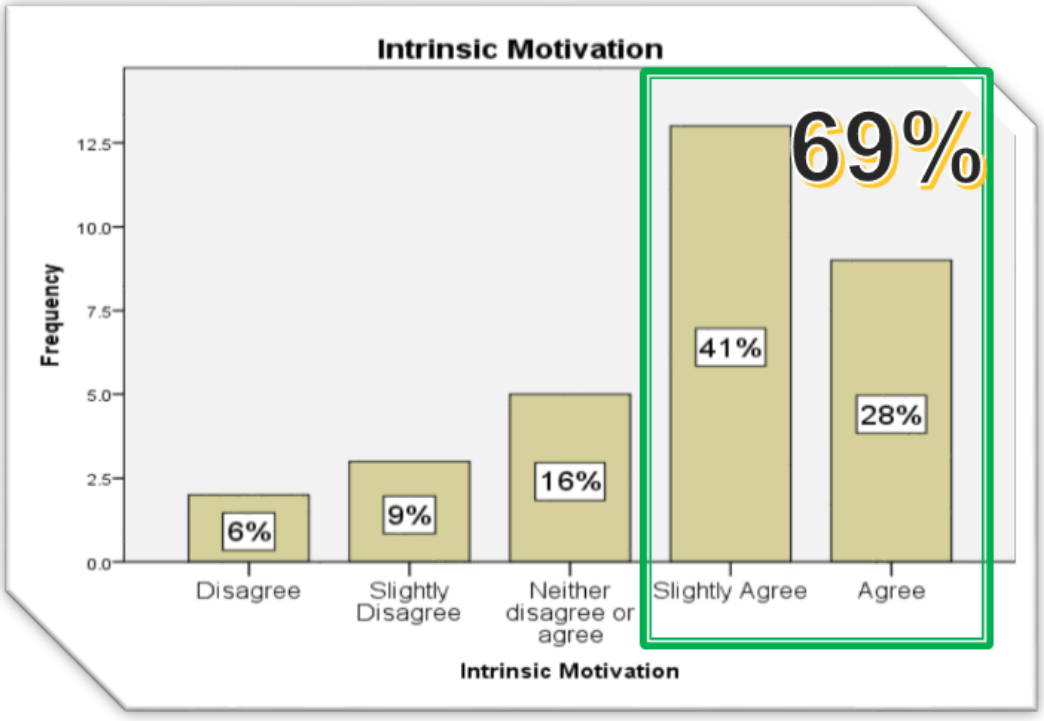
The Survey Scale:

1 = Disagree, 2 = Slightly disagree, 3 = Neither disagree or agree, 4 = Slightly agree, 5 = Agree.

Table 8: Summated results for each survey category

Q. No.	Concept Measured	Mean
Q1 – Q5	Intrinsic Work Motivation (job tasks are enjoyable and interesting)	3.68
Q6 – Q11	Work Engagement (investment of hands, head and heart in the job	4.02
Q12 – Q19	Autonomy (The freedom to choose methods, schedule work and make decisions)	2.70
Q20 – Q28	Organisational Support (Feelings, Personal Needs, Fairness, Recognition and Development	2.82

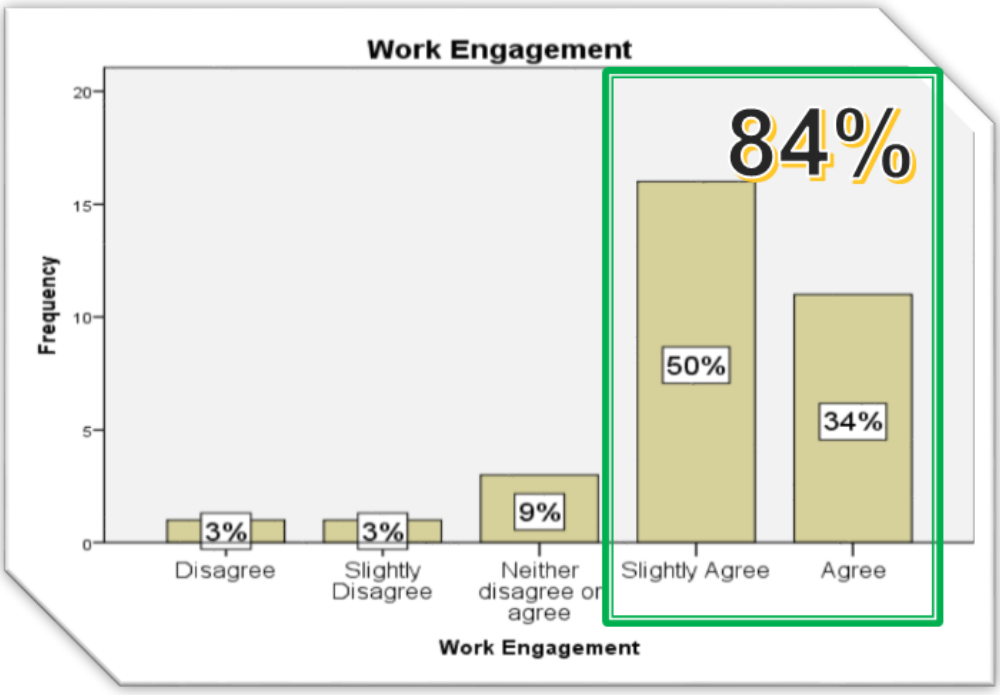
Figure 14: Distribution of Intrinsic Motivation Survey Results



Intrinsic Work Motivation

All five intrinsic work motivation questions scored above three indicating that the average production operator enjoyed their work tasks and found them interesting. In fact, sixty-nine percent of production operators agreed that they found their jobs satisfying. This was a strong endorsement and a little surprising as the work is quite repetitive. The industry type and the product being manufactured may provide some support to the positive score, as evidence does suggest that there may be a certain amount of pride in manufacturing aerospace products. Satisfaction from doing the job well scored a high of over four also. The organisation does pride itself on zero customer complaints, and at the time of the survey the organisation had three years without a customer complaint. Learning new tasks and taking on interesting challenges also both scored above three. This is encouraging as the organisation sees huge benefit by increasing production cross-training, which allows for more flexibility and fits with improvements in the overall lean production system.

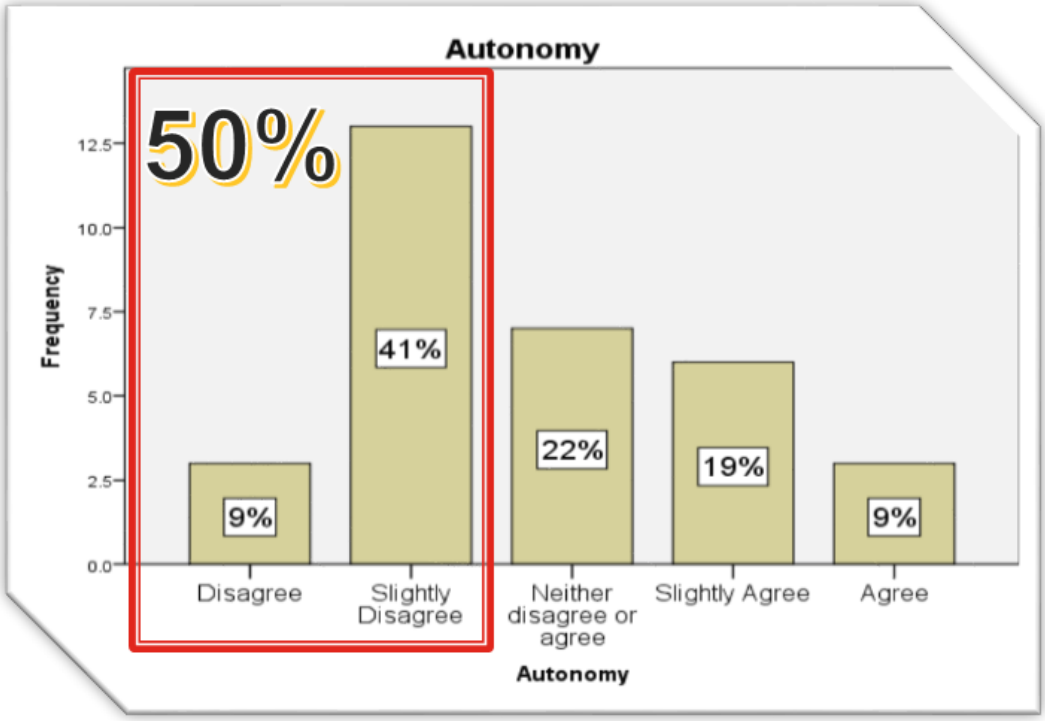
Figure 15: Distribution of Work Engagement Survey Results



Work Engagement

Work engagement scored positively across all six survey questions. An average of eighty-four percent of the production workers agreed with the statements on engagement. Emphasis was placed upon the energy and intensity that is part of the job role, and four of the six questions scored above average indicating that the production operator feel they are engaged in their work. Questions remain on the internal level of bias in relation to a person rating their own engagement levels. There is also a question here on the meaning of engagement as pointed out in the original literature where related concepts may be influencing these results, such as job satisfaction, job involvement, and job commitment (Christian *et al*., 2011). These subtle differences between what the worker perceives as being engaged versus an attitude to the job, or an emotional attachment may provide some evidence as to such positive responses.

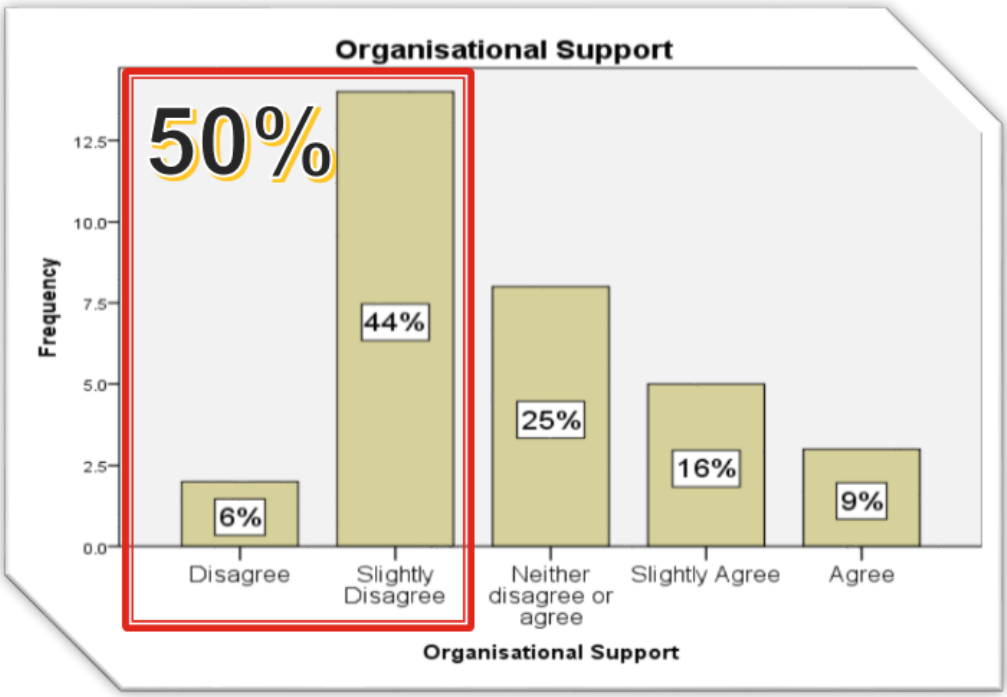
Figure 16: Distribution of Autonomy Survey Results



Autonomy

Autonomy scored much lower, with six of the eight survey questions scoring below three. The ability of the production operator to schedule their own work scored the lowest at two, and this indicated that they had little or no control in the planning of their work. This wasn't surprising, as schedules are a task completed outside of the production operators control. Sequencing and choice of methods also scored low which also indicated that the standardisation of production did not allow for operator discretion. However personal initiative and decision making on the job scored above three, which implies that the production operator has a certain amount of control in the way they carry out their job role, and certain interventions can be made in making judgment calls on work tasks. However due to the overall low score, the aspects of autonomy need to be probed deeper later in the research in order to understand how the organisation could provide improved autonomy to the production operators.

Figure 17: Distribution of Organisational Support Survey Results



Organisational Support

Organisational support scored very similar to autonomy in that fifty percent disagreed with the statements, with six of the nine survey questions scoring below three. This revealed that although the production operators believed they were engaged in their work and found the jobs interesting, they did not believe that the organisation were interested in their personal needs, and did not consider their personal feelings when making decisions that affected them. Taking account of their opinions and receiving recognition for good work also scored low. On the positive side, the average worker did believe they were treated with fairness and respect, and were not criticised for making mistakes. In the first section, the operators scored positively on taking pleasure from learning new tasks, but in the final question they scored negatively on the organisation offering abundant opportunities to learn new tasks. This suggests that the average production operators are willing to learn new tasks, but the offerings are not available in their current work environment. The flexibility of a production operator having multiple skills has huge advantages for the organisation in terms of lean productivity, and therefore it needs to be understood just why operators feel that appropriate offerings are not available.

The findings from the engagement survey indicate that the production operators find their job tasks intrinsically motivating, are engaged in their work, but don't feel they have adequate control in the way the job is carried out, or are adequately supported by the organisation in terms of their personal needs. Although frontline engagement descriptions need to be examined and defined further in relation to the production operators understanding, there are opportunities to explore autonomy and organisational support. Upon reflection, the research also brings into question the production operator's willingness to collaborate and participate more with the organisation if given the scope to do so. Following this quantitative stage of the case study, the research then moved on to the exploratory stage to understand the above findings in more detail using a variety of methods and a cross section of participants across the entire organisation.

Qualitative Design

There are many views on how things get done in operations, and as with any organisation this mix of opinions has the possibility of throwing up some very important insights. Participants will be sought that are prepared to give as much feedback on the topic of engagement as possible. Not everyone may feel comfortable discussing such sensitive matters with a departmental manager. On the positive side this organisation has a very mature workforce, with an average age of forty-nine years. This maturity is one reason why many employees are not afraid to express their opinions.

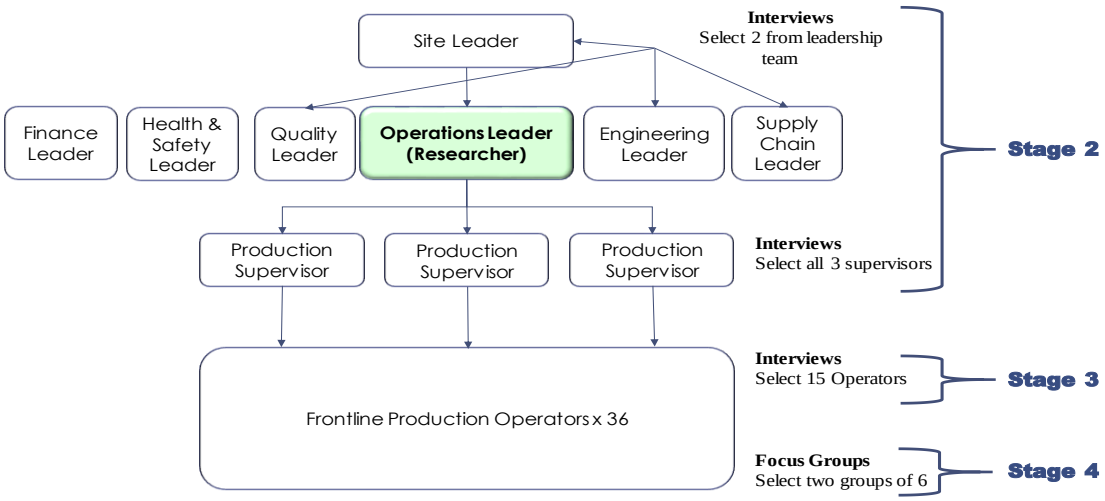
One needs to take account of the working relationships built up over time, and also consider the ease of conversing with those that are more willing to speak about such matters. During the previous six months, and especially following the quantitative engagement survey, many of the employees in the organisation became aware that this academic research was being carried out, and many have already offered their opinions on the subject. It is against this background that those who can share their experience of working for this organisation in terms of the engagement factors outlined in the conceptual paper are selected to participate.

Participant Identification and Selection

A purposive sampling strategy was decided upon as certain individuals may have a unique, different of important perspective on the subject in question and their participation should be ensured (Mason, 2002; Trost, 1986). This case study is

conducted entirely in the researchers place of employment. All participants are well known to each other, and have worked together for over twenty years. To protect these participants, it is important to ensure that all data collected is treated sensitively. All interviewees will remain anonymous and transcripts will be sanitised to prevent any identification of individuals. This selection of participants brings with it significant challenges in terms of fulfilling a dual role, and the bias and confidence in obtaining the information. The total number of employees in the organisation is eighty. The sample size chosen for the interview stage was based upon taking approximately twenty five percent. Therefore 20 interviews is considered sufficient to collect the evidence. Figure 18 below shows the organisational chart and participant selection areas for the entire study.

Figure 18: Organisational Structure and Participant Selection



Leadership Team Members X 2

The leadership team consists of seven members (including the Site Leader). Six report into the Site Leader and all are responsible for managing a department. Each member has multiple interactions with the operations team, including supervisors and frontline operators. Two of the leadership team will be selected based upon their willingness to participate, but also based upon their knowledge of operations, and the dynamics of the production operator job responsibilities. In selecting members of this group, careful consideration needs to be placed upon the separation of the working relationships between colleagues, and the academic research being carried out. This will be a difficult barrier to overcome, but there is a belief that the working relationship and current climate within the organisation will allow for these interviews to take place

without significant issues with bias or conflict of interest. The opinions coming from the leadership team is important in that their perceptions will be compared with the perceptions of supervisors and frontline workers to understand the similarities and differences on engagement of the production group.

Production Supervisors X 3

The frontline production operators report directly to their Production Supervisor. There are only three production supervisors, and therefore all three will be selected for the study. This is a key role, as the production supervisor is the link between the production operators and the leadership team. They execute the daily work plans directly with the production operators. This hourly and daily interaction with the production operators offer a unique perspective on how information is disseminated in operations and the feedback both ways. They have a close working relationship with the production operators. Another significant factor in selecting all production supervisors is that they all have over twenty years' experience each, working in the organisation, and would have worked through many different change initiatives during this time. As all three were required, they were asked to participate early in the research and agreed to do so. The initial findings from both the leadership participants and supervisors will be completed in this paper prior to the completion of interviews with the frontline production operators.

Semi-Structured Interview Guides

The collection of interview data from managers, supervisors and operators will be supported using an interview guide template covering the three concepts of leadership style, followership and autonomy. The aim is to achieve comparable information from different perspectives. Therefore, two interview guides will be used, one for supervisors and managers, and one for production operators. The supervisor/manager will be asked to give their perception on the engagement levels of the production operators, while the production operator will be asked for their opinion based on the actual job they do. For illustration purposes, Table 9 below compares both sets of questions, taking two questions at random to show the difference in terminology used with both groups. The semi-structured interview guides are shown in Appendices 9 and 10 of this paper.

Table 9: Interview Guide Rationale

Manager / Supervisor Interview	Production Operator Interview	Rationale	Literature
Q16: How would you describe the maturity levels within the production operator group in relation to taking on further aspects in their job?	**Q16:** Would you like the opportunity to participate more in managing your own workplace and taking on extra job responsibilities?	This question seeks to explore factors related to the production operator's willingness to take on extra responsibilities.	Followership and the co-production of leadership. Carsten and Uhl-Bien, (2012)
Q9: Is sufficient information given to the production operators in order for them to have a greater level of understanding of immediate and long term requirements? What kind of improvements could we make here to improve engagement levels?	**Q9:** Do you receive sufficient information on aspects of the job that could allow you to engage more in issues of importance? Use examples such as customer deliveries, quality etc.	This question examines how much information is communicated to the production operator, including the mechanisms used to do so, and opportunities for the operator to have greater levels of control.	Autonomy and authority to make one's own decisions based on good communications and trust in employees to be responsible for own outcomes. Hackman and Oldham, (1976) Deci and Ryan, (2000)

Although both groups will be asked similar questions, they are framed differently which will allow for comparisons and contradictions to be made when analysing the data. By keeping the same numbering system, it will make it easier during the analysis stage to observe themes from the data.

Stage 2 – Manager / Supervisor Interviews

The Manager and Supervisor interviews were conducted over a three-week period allowing time to reflect and transcribe each interview as shown below in Table 10. Each participant was given an explanation on the objectives of the research and the type of information being sought. It was decided that interview guides would not be distributed to the participants prior to the interview. Although a pilot study was not conducted, the

questionnaire was tested with a colleague not related to the organisation for timing, understanding of the question and clarification purposes. Each interview was recorded so it could be transcribed later, and therefore notes were not taken during the interview itself. This had the benefit of a good discussion, without the formalities and obtrusive nature of trying to write down notes while interviewing. Each interview lasted for approximately one hour. Initial ideas were noted from re-reading the transcribed text several times. The recordings were also played back repeatedly to achieve more context and tone, doing so while reading the transcript. Table 10 below outlines the interviewee participant details and coding used.

Table 10: Interviewee Participant Details

Code	Job Title	Interview Date	Duration (mins)
PS 01	Production Supervisor	23/08/2017	56
PS 02	Production Supervisor	25/08/2017	53
PS 03	Production Supervisor	01/09/2017	57
LT 01	Leadership Team	05/09/2017	67
LT 02	Leadership Team	08/09/2017	62

Thematic Analysis

Thematic analysis was used to identify patterns in the gathered data. Themes and concepts can be embedded throughout the interviews. Themes may also reside in our heads, and just thinking about the data can create the linkages needed to understand meanings and experiences of those interviewed (Braun and Clarke, 2006). In understanding just what a theme consists of, Braun and Clarke (2006: 82) indicate that it is a question of "prevalence" in that the amount of times the data item appears. However researcher judgement is required here as more instances does not necessarily mean the theme is more crucial. The themes themselves can be inductively identified in a bottom up process and not specifically linked to the authors theoretical interest, or alternatively a top down approach where the themes tie in directly with the original literature. In this research both types will be used, although a more inductive approach will be used in the early stages of analysis.

To guide the research through a systematic method of data coding, Braun and Clarke's (2006) six phase approach was used to narrow the data set down into themes in

preparation for a final report. Although there are six phases, this process is not linear and allows for continuous movement back and forth through the phases as needed. This process is summarised in Table 11 below.

Table 11: Phases of Thematic Analysis

Phase	Description of the Process
Familiarisation with the data	Transcribe, read, re-read and note initial ideas.
Generate initial codes	Code interesting features – collect data relevant for each code
Search for themes	Collate codes into potential themes
Review themes	Check if themes work in relation to coded extracts
Define and name themes	The overall story – generate clear definitions
Produce the report	Final summary – compelling extracts

Table 11: Adapted from Braun and Clarke, 2006.

Data Coding

The coding of the data from themes identified can also take an inductive and deductive approach. In her analysis of qualitative data, and particularly coding, Neale (2016) argues that coding should begin with deductive codes derived from the data generation. She makes the point that if one has specifically taken the time to ask about a particular issue, then it should feed directly back into the original study objectives. Inductive codes will then supplement these deductive codes. The inductive coding will be valuable in complementing or even contradicting the initial assumptions originating from the conceptual literature. Boyatzis (1998: 1) specified that a "good code" is one that captures the richness of the phenomenon, and the process involves recognising a pattern where themes can be identified.

In this paper, the initial findings from the manager and supervisor interviews were analysed through the manual process of coding. There are two reasons for this approach. Number one, with only five initial interviews a manual coding approach was not too complex, and secondly it will act as a method to verify all data when comparing it to the NVivo analysis during the final stages in paper 4. There are limitations when a single person codes and identifies themes in the data, as it doesn't allow for multiple

perspectives from a variety of people with differing expertise (Fereday and Muir-Cochrane, 2006). Steps will be taken, including coding reviews by research colleagues to counter this potential limitation.

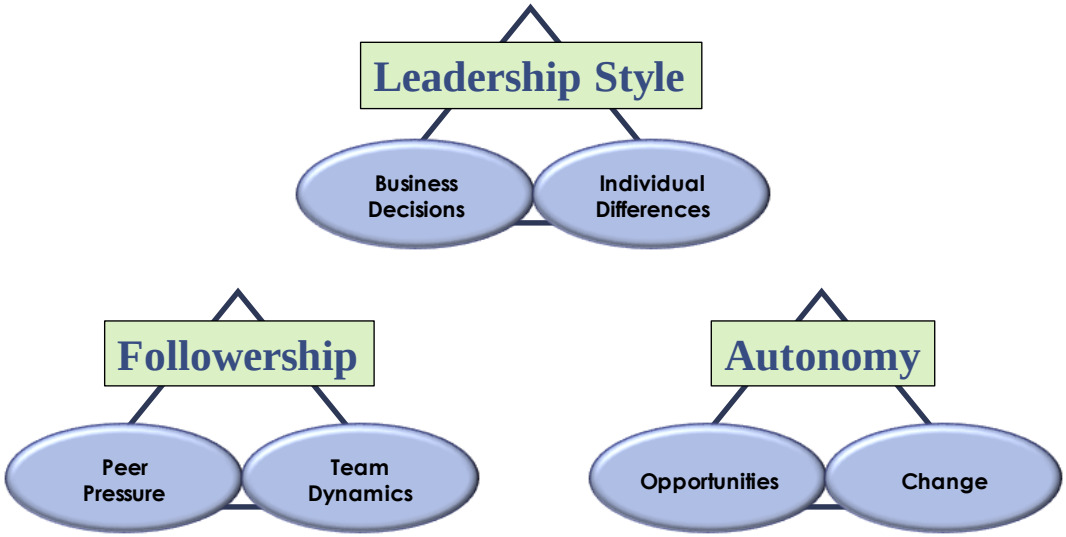
Stage 2 – Initial Findings

Following the positive score from the production operators on their engagement levels in the organisation, this was the first question that needed to be addressed. It was put to them that eighty-four percent of production operators felt they were engaged in their work. All managers and supervisors were surprised this scored so high. It was suggested that production operators have pride in the work tasks, and that may offer some justification on such a high score. It was also alluded to that the term engagement may mean different things to different people.

> "I think it appears quite high versus what the lads do. To me the word engagement means coming in and whether I'm on site or not guys would just work away, and I don't think 84% of them would work away if there wasn't some sort of supervision there to make it happen. It seems quite high to me anyway, and I'm not sure what being engaged means if that's what they think?" (PS 02)

Another opinion on such a high score was related to job security, type of work, and the general conditions of employment versus the actual engagement in extra discretionary activity. Following these initial findings, a thematic analysis was completed on each factor of engagement. Two core themes on each factor were analysed as part of the initial findings and are displayed in Figure 19 below.

Figure 19: Thematic Map – Core Themes



Leadership Style

Findings here began with the changes that have taken place over the past number of years. There was consensus between managers and supervisors that the organisation has moved away from the top down autocratic style of leadership to a much greater level of participation in decision making ability. However, when questioned on why it was that production operators scored organisational support low in terms of making decisions that affect them, it was suggested that this relates to the business needs and decisions required to meet the performance metrics of the plant. While they do try and facilitate operators preferences, this is not always possible due to many conflicting demands.

> "Sometimes it's just not possible to facilitate personal issues, as some [production operators] would like to be doing early shifts, or work in different areas of the plant, but we must manage the business too, and those decisions that they don't like may be the thing that they remember most when asked."(LT 02)

The managers and supervisors also agreed that there were now several forums where information gets communicated, and thus they believe that the frontline operators are much more informed on daily issues. In relation to the style used in supervision, the general theme was one of making it fit to suit the person and situation. All interviewees indicated that supervisory interaction was very much dependent upon the relationship with the individual, where some just got on with their job and needed very little intervention, while others needed constant supervision.

> "There are some people who come into work every day on time, they display a great work ethic, a good attitude, they do their job, if they need help they put up their hand and ask, but predominately they do their work unsupervised, while with others you need to be constantly checking where they are at, or the work just won't get done" (PS 01)

It was highlighted during the interviews that there tends to be three distinct categories of operators. Those who get on with their job, those who behave negatively towards the organisation, with the largest group in the centre who may be influenced by engaged workers, or by those who are actively disengaged.

> "Then you have the main body of people in the middle, that obviously the people at the bottom are trying to influence and drag down with them, the people at the top are probably stand-alone people who are not really influenced by anyone. I don't think they necessarily try and

> influence the greater body of people as they are their own men and women" (PS 03)

Followership

Some very interesting findings emerged from this section of the interview. The objective of this section was to explore whether production operators were prepared to participate and collaborate more with the organisation if given more autonomy to do so. Although the literature in the conceptual framework focused more on the relationship between those in authority and production operators, what emerged was the internal relationship between the production operators themselves. The data supported an environment of union agreements and expectations where it was not seen as popular to step outside of these work-related norms. According to the supervisors and managers, the concern of peer pressure when taking on extra discretionary effort was a significant barrier when going outside of the normal routine of the job role. The precedent that may be set by an operator taking on extra responsibilities was the general feeling of interviewees, and the danger that any new initiatives taken on could be used by the organisation as a new standard.

> "If you do something outside of what you are supposed to be doing and it gets out to the others, you are set up for ridicule" (PS 01)

> "I've seen pressure being put on others by fellow workers. In certain scenarios where there are groups of people who would call down to an operator and put undue pressure on him to make sure he toes the line as everybody else is doing." (PS 03)

Another interesting finding in this section was the belief that participation in team meetings was difficult and the setting uncomfortable. It appears individuals would prefer to discuss production issues on a one to one basis with their supervisors, rather than bring the issue up in their tier meeting. Although the team of operators may discuss general issues around a change taking place, an audit or visit to the plant, they would be reluctant to discuss quality or productivity issues within their own team meeting.

> "If I [supervisor] know there are issues in the area and prompt them [production operator] I think then they will give you the information, but again you have to prod them. I think the work flow specialist would be uncomfortable doing this." (PS 01)

> "Having groups of 5 or 6 people together in that forum is probably not possible. Smaller groups where the WFS [work flow specialist] goes to

> the person one on one in the cell to enquire about those type of issues would be more beneficial." (LT 01)

The opinion of the supervisors and managers were mixed in relation to root cause of this non-participation. One potential cause was the embarrassment of sharing cell issues with co-workers, or stepping outside of one's comfort zone. For whatever reason, there seems to be a reluctance to put forward constructive views on ways to support production in the current team meeting forum.

Autonomy

Standardisation within production was discussed as a possible factor in reducing the amount of control an operator had over their job. Even though this scored low in the engagement survey, the managers and supervisors felt that this may have been related to the terminology used in the survey, as scheduling and sequencing of parts is an externally managed process and the production operators would see this as something outside their control anyway. According to the supervisors and manager interviews, there are numerous opportunities within the job function itself for the operator to have greater levels of autonomy. These include autonomous machine maintenance, the completion of daily metrics and supporting and helping other job functions.

> "On the schedule, there is not a lot we can do. There are certain things out there that operators could be more involved in. Take for example set-up. They may see better ways to prepare for and improve set-ups. Some of the processes they could have more autonomy. It goes back to the point that some just don't want it and want to be led along." (LT 01)

It was suggested that although cross-training in other similar tasks was encouraged, it was not a motivation for the operator due to the resistance of change. The majority of production operators have been doing one job for many years and would find it difficult to step outside of their comfort zone. There is no financial incentive anyway and therefore may not be seen as something positive. In fact, some of the participants felt that being cross trained in many areas could affect the operator in a negative way, in that they would constantly be moved around and never actually "own" a process.

> "They are quite content doing what they want to do. Sometimes it's the fear of the unknown. You're in a job and you are not challenged and happy enough to plod along." (PS 02)

That said, there were a minority who did embrace cross training and this may be related to their own need for job variation and the possibility of having a more favourable shift

rota. However, the majority did prefer to do their current job and one potential factor was the average age of the work force. It was pointed out in that if we had a younger work force, then there may be a much greater appetite to get involved in new processes, and opportunities in the future.

Stage 2 - Summary

At this point a manual analysis has been completed on five manager/supervisor interviews. When comparing these findings to the outcome of the engagement survey carried out with all production operators there are several differing opinions. The most significant is the definition of a production operator to be engaged in their work. It appears that what one person believes the definition of work engagement to be, may be very different to another. The current belief by the production operator on what it means to be engaged may be too narrowly focused, only looking at the job task itself.

It is also the opinion of the supervisors that there are operators who are willing to take on extra discretionary work, but the environment is not supportive due to work union norms and generic agreements. The managers did not concur with this opinion as didn't believe that there were any agreements with the union that would impede engagement. The supervisors however had a much stronger opinion on how influential co-workers can be. According to the supervisors, this co-worker influence may impede engagement, and as such may be preventing those who would like the opportunity to engage more not having the support to do so from their fellow workers. These are quite sensitive concepts, but need to be explored further during the production operator interviews.

Stage 3 – Production Operator Interviews

The next phase of this research will be the production operator interviews. There is a total of thirty-six frontline production operators working in the organisation. Fifteen of these operators will be selected from across all three production departments. The selection will be based upon the willingness of the candidates to contribute to the study, and the pre-understanding of the diversity of this population. Although this will be a purposive sample, it is also voluntary and an aspect of voluntary participation is that individuals who consent may be different than those who do not in ways not related to sampling criteria (Robinson, 2014). This may not necessarily be a negative aspect, in that these individuals are more likely to be more open and more interested in the topic

of engagement. A cross section of candidates will ensure that representation is achieved from all departments of production. The experience with this group will ensure those who have diverse opinions on the engagement topic are asked to contribute to this study. Following the initial engagement survey, many have already expressed opinions as to the factors for engagement, and this was encouraging. Previous data will be considered, reflecting upon the initial engagement survey carried out among all frontline workers, plus the initial findings from the managers and supervisors above. Based upon these initial findings, the production operator semi-structured interview template will need to be revised to accommodate co-worker peer pressure findings. Methods used to explore these findings further may also need to use a different technique. One such technique that is applicable to identifying such behaviours is the critical incident technique developed in 1954 by John C. Flanagan. The technique has become an effective exploratory tool in research over the past 50 years.

Critical Incident Techniques

Critical Incident Technique (CIT) is one method used to capture the participants' interpretations of their work settings and is more likely to portray a more holistic description of the workplace (Redmann and Stitt-Gohdes, 2000). By focusing on the production operators perceptions of instances that took place, this technique can reflect challenging or problematic aspects in their working environment, and based upon the initial findings this may act as the catalyst to extract this type of detail. This technique offers a step by step guide to collect and analyse information about human behaviour and can yield rich data that reflects real life experiences (Hughes, 2007). This technique is suitable for this research and was defined by it's creator (Flanagan, 1954: 327) as;

> A set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles.

It's a five-step approach starting with the objective, defining what one aims to accomplish in the study. In step two the plan is developed and includes the detail of how data will be collected. This collection of data can be done in several ways, and the intent here is using the interview process to record extreme incidents that have occurred in the past. The accuracy of recalled incidents can be obtained from the precise details given by the participant (Butterfield *et al*., 2005). The forth step involves the analysis

of data, and Flanagan, (1954: 344) points out this can be difficult in that you need to formulate categories that summarises the data, while at the same time "sacrificing as little as possible of their comprehensiveness, specificity, and validity". The fifth step aims to report on the data. During this step the introduction of biases will be checked and considered, if any have been introduced, and the limitations of the data.

The CIT has the opportunity of providing a rich source of data as it allows the participants to explain what incidents are more relevant to them. It is more inductive in nature in that the participant tells of their experience in their own words (Gremler, 2004). Although the collection of data will be through semi-structured interviews, this does allow the conversation to take its own course where the respondent can recall specific events that does not force them into a rigid set of principles, but is flexible and can be modified to meet the objectives of the research (Burns *et al*., 2000). CIT interviews also allow participants to share first-hand experiences on human activities and can assist in the development of broader patterns (Chell, 1998). CIT has been recommended in exploratory research where the subject matter is based upon feelings, attitudes and behavioural concerns, but one needs to be careful on the subjectivity of findings due to its personal recalled nature (Hughes, 2007).

Stage 4 – Focus Groups

It was decided early in the research that individual interviews would have the potential to collect information on work engagement that was sensitive, especially using critical incident techniques where one may not be willing to share their own individual experiences in a group setting. On the other hand, a focus group could offer a different perspective on engagement where participants may have opposing beliefs and this setting could offer further elaboration and justification of these views. Following the findings from the manager and supervisor interviews, the focus group could be an ideal situation to challenge these views. As this phase of the research will be conducted once all interview data has been transcribed and coded, new findings may have been uncovered, and this final phase will help clarify any outstanding issues that remain unanswered. An inductive finding from the supervisor interviews indicated that work engagement was influenced by production operator peer pressure, and therefore a focus group setting may not be the best forum in this case, and may need to be considered following the analysis of data from stage 3.

Conclusion and Next Steps

The objective of this paper was to operationalise the design methodology. This design needed to both be practical so that it could extract the right information from the research participants, while also ensuring that the theoretical conceptual framework was adequately addressed. An inductive and deductive approach was required to ensure that the theoretical questions were answered, while also allowing for new and unexpected information. The initial engagement survey with all of the production operators created the foundation for the design of the interview questions. The initial five interviews have collected important exploratory data that will be beneficial in preparation for the main body of research, the production operator interviews. This will be stage 3 of the case study, and although the semi-structured interviews have been prepared in advance, these will need to be adjusted to take account of the initial findings above. Getting the opinions and perceptions of the supervisors and managers will help tailor the next set of interviews. The greatest concern in the initial interview process was the authors relationship with his peers and subordinates, but on reflection this process worked without any significant issues with the employees so far. Once the interviews with the production operators are concluded, the data will be analysed using NVivo 11, also incorporating the initial interviews from the managers and supervisors. It was envisaged that stage 4 of the case study process would be the analysis of the interrelationships that exist between leadership style, followership and autonomy using a focus group setting with the production operators. Based upon initial feedback from production supervisors on work engagement, a theme about peer pressure in group settings is emanating from the data. Therefore, the focus group forum, as planned will require careful consideration as a method to complete this analysis. This decision however cannot be taken until all interviews have been concluded, and the data fully analysed.

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Appendices

Appendix 1 - Honeywell PER Survey Questions

"Manager" in this survey means the person to whom you directly report.

1. My manager treats me fairly.
2. My manager is sensitive to my need for personal and family time.
3. My manager listens to me and responds to my issues.
4. My manager respects my opinions and ideas.
5. I have open and honest communications with my manager.
6. I am provided opportunities for skills development and career growth.
7. My workplace is safe.
8. My manager treats me with dignity and respect.
9. I am paid fairly for the work I do and the contributions I make.
10. I am provided ways to resolve my work-related problems and concerns.
11. My manager understands the issues and challenges I face on the job.
12. I understand our company's business goals and objectives.
13. I feel my employment at Honeywell is secure.
14. My manager evaluates my performance fairly.
15. I receive recognition for work well done.
16. I engage in meaningful two-way communications with my manager.
17. My manager supports me in making improvements to my work and my workplace.
18. My benefits package is competitive.
19. Safety, health and environmental concerns are addressed in a timely manner.
20. I have the resources (equipment, tools, supplies, information) I need to do my job effectively.
21. I would recommend Honeywell as a place of employment to a friend.

Appendix 2 – Work Engagement Survey

WORK ENGAGEMENT RESEARCH

Research Overview

I am currently carrying out a research project into work engagement within the frontline manufacturing sector. This survey is a preliminary step to explore the attitudes and opinions of the frontline worker in relation to the research topic of Work Engagement and related concepts. It aims to get a general understanding as to the nature of work engagement of the direct manufacturing operators within Honeywell Aerospace, so that the main body of research can be refined to target areas of significant relevance to the Honeywell employees and the researcher.

Confidentiality and Ethical Guidelines

Your responses to this survey are completely anonymous. You will not be asked to provide your name anywhere on this survey. As a further safeguard of your confidentiality, no one outside will see or have access to completed surveys. The collected data will be used only in aggregated format to quantify engagement levels so that areas of significant importance and relevance can be explored further during the action research process.

The attached survey contains 28 questions and should take approximately 10 to 15 minutes to complete. Participation in this study is voluntary and you may withdraw from participation at any time. Once the survey responses are submitted they cannot be withdrawn from the aggregated results. If you have any questions you may contact John Breen.

Thank you for your participation.

John Breen

_____

Work Engagement Survey

This survey is intended to gauge your perceptions of frontline work in relation to your own personal opinion and experience of Work Motivation, Work Engagement, Autonomy and Organisational Support.

Please read each statement carefully and then select **one** response that best indicates your level of agreement or disagreement. Mark your responses by filling in one circle for each question. If you make a mistake, just cross it out and complete again. There are 4 sections with a total of 28 questions (Front and back).

Tier Dept. (mostly work in) Forge ○ Machining ○ Final Process ○

Questions 1 to 5 – INTRINSIC WORK MOTIVATION **Working on tasks because you find them enjoyable and interesting**						
No.	Question	Disagree	Slightly Disagree	Neither disagree or agree	Slightly Agree	Agree
1	The tasks that I do at work are enjoyable.	○	○	○	○	○
2	My job is meaningful to me.	○	○	○	○	○
3	At work I take pleasure from learning new tasks.	○	○	○	○	○
4	At work I get satisfaction from taking on interesting challenges.	○	○	○	○	○
5	I get satisfaction from doing my job well.	○	○	○	○	○

Questions 6 to 11 - WORK ENGAGEMENT **The investment of hands, head and heart in the performance of work**						
No.	Question	Disagree	Slightly Disagree	Neither disagree or agree	Slightly Agree	Agree
6	I devote a lot of energy to my job.	○	○	○	○	○
7	I strive as hard as I can to complete my job tasks.	○	○	○	○	○
8	I am enthusiastic about my job.	○	○	○	○	○
9	I am proud of the work that I do.	○	○	○	○	○
10	At work, I pay a lot of attention to my job.	○	○	○	○	○
11	I feel happy when I am working intensely.	○	○	○	○	○

Questions 12 to 19 – AUTONOMY **The freedom to choose methods, schedule work and make decisions in performing your job tasks**						
No.	Question	Disagree	Slightly Disagree	Neither disagree or agree	Slightly Agree	Agree
12	I am able to choose the way to go about my job (the procedures to utilise).	○	○	○	○	○
13	I am free to choose the method(s) to use in carrying out my work.	○	○	○	○	○
14	I have control over the scheduling of my work.	○	○	○	○	○
15	I have some control over the sequencing of my work activities (when I do what).	○	○	○	○	○
16	My job is such that I can decide when to do particular work activities.	○	○	○	○	○
17	The job gives me a chance to use my personal initiative or judgment in carrying out the work.	○	○	○	○	○
18	The job allows me to make a lot of decisions on my own.	○	○	○	○	○
19	The job provides me with significant autonomy in making decisions.	○	○	○	○	○

Questions 20 to 28 - ORGANISATIONAL SUPPORT Feelings, Personal Needs, Fairness, Recognition and Development in Work						
No.	Question	Disagree	Slightly Disagree	Neither disagree or agree	Slightly Agree	Agree
20	This organisation is interested in how I feel and how I am doing.	○	○	○	○	○
21	This organisation pays attention to my personal needs.	○	○	○	○	○
22	This organisation considers my personal feelings when implementing decisions that affect me.	○	○	○	○	○
23	In this job I am treated with fairness and respect.	○	○	○	○	○
24	In this job I receive recognition when I do good work.	○	○	○	○	○
25	In this job my opinions seem to count.	○	○	○	○	○
26	This organisation treats my mistakes as a problem to be solved rather than a focus for criticism.	○	○	○	○	○
27	This organisation provides me with constructive feedback on how I am doing in my job.	○	○	○	○	○
28	This organisation offers me abundant opportunities to learn new skills.	○	○	○	○	○

Appendix 3 - Information Sheet for Work Engagement Survey

Researcher's name: John Breen

Project title: Work Engagement with the Frontline Manufacturing Sector

What is the purpose of this research survey?

This survey is a preliminary study to explore the attitudes and opinions of frontline workers in Honeywell Aerospace Waterford in relation to Intrinsic Motivation, Work Engagement, Autonomy, and Organisational Support. This was outlined during preliminary tier meetings on Wednesday 1st February 2017.

Why am I being asked to participate?

As this study seeks to understand the factors that impact the engagement or disengagement of the frontline worker, it is important that the information comes directly from those who are involved on the frontline and do these tasks every day.

Do I have to participate?

No, participation is entirely voluntary and you may withdraw at any time. If you choose to participate you will be adding your opinions in the form of quantitative data.

What would participation in this survey mean for me?

Participating in this survey would mean that your opinions are reflected in an overall data analysis. This data will be used to get a baseline as to what are the main issues that need to be examined in relation to Work Engagement.

What are the benefits of participating?

The study seeks to get a better understanding of the factors related to work engagement concepts in a frontline manufacturing role. It is not the main body of research, but a preliminary study so that the main research takes the correct direction.

What are the risks associated with participating?

The risks associated with participating in the survey relate to the confidentiality of each individual. These risks will be managed by ensuring that the survey is completely anonymous and no one from outside has access to individual feedback forms.

How will data gathered be managed and used in the study?

Data will be collected through survey hard copies. These will be placed in the sealed ballot box until all surveys have been completed. Time will be given to those who are currently absent and may want to participate on their return. This data will then be inputted into a statistical package known as SPSS. This is a numeric database only and makes no reference to any individual or identification number.

Will the results of the survey be made available to me?

Yes, once the data has been entered, a summary will be made available to the production group. This will cover the full production group as an aggregate score only.

Appendix 4 – Engagement Survey Results

No.	SURVEY QUESTIONS	Mean
1	The tasks that I do at work are enjoyable	3.19
2	My job is meaningful to me	3.56
3	At work I take pleasure from learning new tasks	3.59
4	At work I get satisfaction from taking on interesting challenges	3.74
5	I get satisfaction from doing my job well	4.35
6	I devote a lot of energy to my job	4.00
7	I strive as hard as I can to complete my job tasks	4.38
8	I am enthusiastic about my job	3.55
9	I am proud of the work that I do	4.19
10	At work I pay a lot of attention to my job	4.50
11	I feel happy when I am working intensely	3.50
12	I am able to choose the way I go about my job (procedures to utilise)	2.84
13	I am free to choose the methods to use in carrying out my work	2.44
14	I have control over the scheduling of my work	2.00
15	I have some control over the sequencing of my work activities	2.78
16	I can decide when to do particular work activities	2.31
17	My job gives me a chance to use my personal initiative or judgement	3.16
18	The job allows me to make a lot of decisions on my own	3.29
19	The job provides me with significant autonomy in making decisions	2.84
20	This organisation is interested in how I feel and how I am doing	2.28
21	This organisation pays attention to my personal needs	2.94
22	This organisation considers my personal feelings when making decisions that affect me	2.53
23	In this job I am treated with fairness and respect	3.38
24	In this job I receive recognition when I do good work	2.66
25	In this job my opinions seem to count	2.65
26	This organisation treats my mistakes as a problem to be solved rather than a focus for criticism	3.28
27	This organisation provides me with constructive feedback on how I am doing in my job	3.12
28	This organisation offers me abundant opportunities to learn new skills	2.56

Appendix 5 – Interview Participant Information

Researcher's Name: John Breen

Project title: Exploring work engagement of the frontline manufacturing sector

What is the purpose of this research?

This is an academic study. The overall aim of this research is to examine and explore the factors that cause frontline manufacturing operators to either engage or disengage in their work. Therefore the overarching question is; "How can the engagement of frontline operators be improved upon in a standardised manufacturing operation?" The study will explore the engagement of the frontline workers in relation to leadership style, the workers own motivation to participate and the autonomy they have in their daily work lives.

Why am I being asked to participate?

As this study seeks to understand the factors that impact the engagement or disengagement of the frontline worker, it is important that the information originates directly from those who are involved in the daily operation. Other viewpoints are also being sought from operators, supervisors and managers in Honeywell Aerospace Waterford.

Do I have to participate?

No, participation is entirely voluntary and you may withdraw at any time. If you choose to participate you will be asked to sign an informed consent form.

What would participation in this study mean for me?

Participating in this research would mean that your opinions can be reflected in the data findings. This data will be used to get an understanding as to what are the main issues that need to be examined in relation to Work Engagement in the manufacturing sector.

What are the benefits of participating?

The study seeks to get a better understanding of the factors related to work engagement concepts in a frontline manufacturing role, and as such look for improvement opportunities.

What are the risks associated with participating?

The risks associated with participating in this research relate to the confidentiality of each individual. These risks will be managed by ensuring that the research is completely anonymous and no one from outside has access to the information provided. The information provided will not be shared with participants from other interviews or focus groups of this study and all data will be anonymised.

How will data gathered be managed and used in the study?

All information collected in this study will be kept completely anonymous and will adhere to the Data Protection Act's (Ireland) 1988 and 2003. At no time will your actual identity be revealed. You will be assigned a random numerical code. The key linking the code to your name will be kept in a locked file cabinet in a locked office, and no one else will have access to it. The code key and the data will be destroyed within five years of the date of completion of the study. All data provided will be used for the purpose of this study as outlined above and may be used as the basis for articles or presentations in the future. I won't use your name or information that would identify you in audio recordings, publications, or presentations.

Appendix 6 – Interview Consent Form

I have read and understood the information sheet provided and by choosing to give consent:

(please tick the box)

1) I am voluntarily participating in this study. ☐

2) I grant permission to record my interview. ☐

3) I understand that I can withdraw from the study at any point. ☐

4) I understand that my own and my organisation's details will be anonymised. ☐

5) I understand that information provided in this interview will not be shared with participants in other interviews or focus groups. ☐

6) I understand that the anonymised data will be cited in the project/thesis and other publications. ☐

Signatures

Participant _____ Date _____

Researcher _____ Date _____

Appendix 7 – Focus Group Participant Information

Researcher's Name: John Breen

Project Title: Exploring work engagement of the frontline manufacturing sector

What is the purpose of this research?

This is an academic study. The overall aim of this research is to examine and explore the factors that cause frontline manufacturing operators to either engage or disengage in their work. This focus group setting will analyse the interrelationships that exist between leadership style, followership and autonomy in achieving increased levels of work engagement.

Why am I being asked to participate?

As this study seeks to understand the factors that impact the engagement or disengagement of the frontline worker, it is important that the information originates directly from this group.

Do I have to participate?

No, participation is entirely voluntary and you may withdraw at any time. If you choose to participate you will be asked to sign a consent form. In focus group settings questions are directed to the group, not to individuals. You have the right not to answer a question or withdraw from the study at any time.

What would participation in this study mean for me?

Participating in this research would mean that your opinions can be reflected in the data findings. This data will be used to get an understanding as to what are the main issues that need to be examined in relation to work engagement in a manufacturing environment.

What are the benefits of participating?

The study seeks to get a better understanding of the factors related to work engagement concepts in a frontline manufacturing role, and as such look for improvement opportunities.

What are the risks associated with participating?

The risks associated with participating in this research relate to the confidentiality of each individual. These risks will be managed by ensuring that the research is completely anonymous and no one from outside has access to the information provided. The information provided will not be shared with participants from other interviews or focus groups. All data will be anonymised. It is possible that participants in focus groups can repeat comments outside of the group, but I would encourage the importance of confidentiality.

How will data gathered be managed and used in the study?

All information collected in this study will be kept completely anonymous and will adhere to the Data Protection Act's (Ireland) 1988 and 2003. At no time will your actual identity be revealed. All data provided will be used for the purpose of this study as outlined above and may be used as the basis for articles or presentations in the future. I won't use your name or information that would identify you in audio recordings, publications, or presentations.

Appendix 8 – Focus Group Consent Form

I have read and understood the information sheet provided and by choosing to give consent:

(please tick the box)

7) I am voluntarily participating in this study. ☐

8) I grant permission to record this focus group discussion. ☐

9) I understand that I can withdraw from the study at any point. ☐

10) I understand that my own and my organisation's details will be anonymised. ☐

11) I understand that information provided in this focus group discussion will not be shared with participants in other focus groups. ☐

12) I understand that the anonymised data will be cited in the project/thesis and other publications. ☐

Signature

Participant _____ Date _____

Researcher _____ Date _____

Appendix 9 – Interview Guide for Managers / Supervisors

Date:		Time:	
Interviewee No.			

Background of study and participant

Explain the background to the study and the reasons why it is of interest. Explain why respondents' perceptions are being sought. Reiterate the ethical considerations.
The Interviewee – Years working for Organisation.
Brief outline of roles within the organisation

Engagement - General

Q1:	In an engagement survey with all production operators in early 2017, 84% agreed that they were "engaged in their work". Why do you think they scored so high? Discuss the relevant factors.
Q2:	In our annual PER surveys, the average score has been above 76% for the past 6 years. What do you think are the key drivers for such a positive score? What are the key factors influencing such a high score?

LEADERSHIP STYLE - The manner and approach of providing direction, implementing plans and motivating people in the work place.

Q3:	The results of the frontline production operator engagement survey indicate that the organisation does not consider their personal feelings when making decisions that affect them: Why do you think this is the case? Give examples.
Q4:	Do you think that the current leadership style is conducive to improving the engagement levels within the production operator group? Describe the factors that are relevant here.

Q5:	In your opinion, is close supervision of production operators necessary in order for them to do their work and give greater levels of engagement? Why do you think this is the case?
Q6:	When interacting with a production operator, do you choose the style of communication depending upon the person and situation, or would the same style be used regardless of the person and situation. Explore further.
Q7:	As an organisation do you think we pay adequate attention to the opinions of the production operator group? Give examples.
Q8:	Would you classify the organisation as a "fair" employer in the way it treats its production operators? Expand on the significant factors.
Q9:	Is sufficient information given to the production operators in order for them to have a greater level of understanding of immediate and long term requirements? What kind of improvements could we make here to improve engagement levels?
Q10:	As a general rule production operators must be either given rewards or punishment for them to do their work! – What is your opinion on this statement?
Q11:	Is there adequate interaction between those in authority and production operators? Discuss the "us and them" phenomenon!

FOLLOWERSHIP - Participation and Collaboration with the Organisation.

Q12:	In your opinion do production operators prefer to be given clear instructions on what to do when in work, or prefer to decide based upon their own judgement and experience?
Q13:	Are there factors that prevent production operators from voluntary participating in extra discretionary work? Ex. A rate buster, or company man!

Q14:	Do you like to be constructively challenged by production operators on aspects of their work in a positive manner? Discuss
Q15:	What are the factors that either promote or impede cross training on other similar job functions? What would influence a production operator to learn a new task?
Q16:	How would you describe the maturity levels within the production operator group in relation to taking on further aspects in their job? Ex. Schedule, TPM, Daily Targets.
Q17:	During production operator Tier 1 meetings what are the key factors that encourage participation? Is this environment conducive to higher levels of work engagement? Discuss.
Q18:	In general do you think the average production operator wants more participation in the daily management of their work tasks? If given more autonomy to do so, do you think they would be willing to contribute more?

AUTONOMY - The freedom to choose methods, schedule work and make decisions in performing your job tasks.

Q19:	The results of the frontline engagement survey taken in 2017 indicate that the average operator has very little control over the scheduling and sequencing of their work activities. Why do you think this scores low?
Q20:	Are there opportunities where production operators could be given far greater freedom to be in control of their job function?
Q21:	Is the average production operator aware of the customer requirements in relation to the products they are working on and when they are required by the customer?
Q22:	When operators come to work, do they know what they should be working on, or do they need to find out from supervisors at the beginning of their shift?

Q23:	When production operators have a process problem during the day do they generally tend to try and resolve themselves, or call for support?
Q24:	What are the key factors that prevent the organisation giving more autonomy to the production operators? What are the dangers involved?
Q25:	Do you think that the average production operator wants to learn new skills? What are the key drivers preventing cross-training on other job tasks?
Q26:	Working in a highly controlled environment can impact the autonomy the production operator has in their job. How can we deal with this factor to increase the engagement levels?

Other issues

Is there anything that you perceive as relevant to our discussion that you would like to add?	
Thank you for your time.	Reassurance of anonymity/confidentiality

Appendix 10 – Interview Guide for Production Operators

Date:		Time:	
Interviewee No.			

Background of study and participant

Explain the background to the study and the reasons why it is of interest. Explain why respondents' perceptions are being sought. Reiterate the ethical considerations.
The Interviewee – Years working for Organisation.
Brief outline of roles within the organisation

Engagement - General

Q1:	In an engagement survey with all production operators in early 2017, 84% agreed that they were "engaged in their work". Why do you think they scored so high? Discuss the relevant factors.
Q2:	In our annual PER surveys, the average score has been above 76% for the past 6 years. What do you think are the key drivers for such a positive score? What are the key factors influencing such a high score?

LEADERSHIP STYLE - The manner and approach of providing direction, implementing plans and motivating people in the working environment

Q3:	The results of the frontline production operator engagement survey indicate that the organisation does not consider their personal feelings when making decisions that affect them: Why do you think this is the case? Give examples.
Q4:	Describe the effect the current style of leadership has on your own work. Does it encourage you to increase your own level of engagement? Explain.

Q5:	What is your opinion on the level of supervision required on the production floor? Do you think increased levels of supervision has a positive or negative effect on engagement levels?
Q6:	Is a good working relationship with your supervisors and managers important for you to engage in your work tasks? Describe the current working environment and the effect it has on you.
Q7:	Are your opinions on how improvements can be made in the work place taken on board by those in authority? Give some examples here.
Q8:	In your opinion is the organisation a fair employer in terms of how it treats the production operators. Expand on the significant factors.
Q9:	Do you receive sufficient information on aspects of the job that could allow you to engage more in issues of importance? Use examples such as customer deliveries, quality etc.
Q10:	In order for you to engage in extra work activities then there should be some form of extra reward for doing so. Comment on this statement.
Q11:	Do you think there is adequate interaction between leadership members and production operators? Discuss the "us and them" phenomenon!

FOLLOWERSHIP - Participation and Collaboration with the Organisation.

Q12:	Do you like to be given clear instructions on what to do when you come to work, or make those decisions yourself based upon your own judgement and experience?
Q13:	Are there factors that prevent you from voluntary participating in extra discretionary activities in work? Does the environment welcome those who like to give that extra level of work engagement in their job?
Q14:	Do you like to constructively challenge those in authority on how your job tasks are carried out in order to improve the way things get done?
Q15:	Do you like to learn new job tasks as a production operator? Describe the positive and negative impact this can have for yourself.

Q16:	Would you like the opportunity to participate more in managing your own workplace and taking on extra job responsibilities? – Ex. Schedule, TPM, Daily Targets?
Q17:	Are production Tier 1 meetings a relevant format for encouraging greater levels of engagement among the group? Discuss the pros and cons and factors that could provide greater levels of participation.
Q18:	Can you describe the factors that either allow or prevent you from participating more in daily work tasks? If you had more autonomy in your job, do you think you would be prepared to take on more responsibilities?

AUTONOMY - The freedom to choose methods, schedule work and make decisions in performing your job tasks.

Q19:	The results of the frontline engagement survey taken in 2017 indicate that the average operator has very little control over the scheduling and sequencing of their work activities. Why do you think this scores low?
Q20:	Are there opportunities where production operators could be given far greater freedom to be in control of their job function?
Q21:	Are you aware of the customer requirements in relation to the products you are working on and when they are required by the customer? Discuss and use examples.
Q22:	When you come into work, do you usually know what you will be doing or do you need to ask supervision what to work on during the shift?
Q23:	If you have a process problem during the day, do you prefer to call for support or try to resolve yourself? Discuss the various interactions.
Q24:	What are the dangers involved in providing greater levels of autonomy for the production operator on how the job is carried out?
Q25:	Do you like to learn new skills in work? Are there factors that prevent you from learning new skills? Discuss organisation / yourself.

Q26:	Working in a highly controlled environment can impact the autonomy the production operator has in their job. How can we deal with this factor to increase the engagement levels?

Other issues

Is there anything that you perceive as relevant to our discussion that you would like to add?	
Thank you for your time.	Reassurance of anonymity/confidentiality

Appendix 11 – Focus Group Discussion Template

Analyse the interrelationships that exist between leadership style, followership and autonomy in achieving increased levels of work engagement.

Explain the background to the study and the reasons why it is of interest. Explain why respondents' perceptions are being sought. Reiterate the ethical considerations.

General

- 84% agreed that they were engaged in their work – Discuss.
- Why do we score so positively in annual PER Surveys? – Impact on Engagement

Leadership Style: (Directive / Democratic / Shared)

- Discuss the current issues that prevent an operator engaging in their work.
- Leadership styles that improve or prevent engagement – Examples.
- How are opinions taken on board by those in authority?
- Is sufficient information received in order for one to engage more? – Discuss.
- Are there expectations for giving extra discretionary effort? – R&R, - Discuss.

Followership: (Anti-Authoritarian / Passive / Proactive)

- Factors in the workplace that prevent one giving extra discretionary effort.
- Just follow instruction or preference to constructively challenge - Discuss
- Cross-training and the incentive to take on new production work tasks
- Production Tier 1 meetings – Pros and Cons – Contribution to engagement
- The willingness to take on more responsibility – Positive/Negative

Autonomy: (External Regulation / Amotivation / Autonomous Motivation)

- Discuss the control the production operator has in their daily work tasks
- Opportunities where the operator could have more discretion in their job
- Is all relevant data available in order to schedule and sequence job tasks?
- When you come to work, do you know what you will be doing for the day?
- Discuss the dangers involved in providing greater levels of autonomy

Concluding Remarks:

Paper 4: Findings and Discussion

Preface to Paper 4

A significant development during the initial findings was the issue of peer pressure among frontline co-workers. It was therefore decided at this stage that the use of focus groups was not appropriate. The willingness of frontline workers to discuss openly their opinions and beliefs in going above and beyond their mandatory role would be too challenging in this environment. The decision was made to exclude focus groups as a method to collect evidence. Although focus groups have the benefit of creating discussion and challenging extreme views; in this case study it was assumed that the negative effect of those participating would impede the collection of data and may lead to the withdrawal of participants. Therefore, the suggestion of the external examiners was to drop the focus group element and concentrate on amending the interview guide and probe more on the themes already found and the broader concept of engagement.

Revision of Followership Questionnaire

In paper 3 a semi-structured interview questionnaire was developed to be used with managers, supervisors and frontline staff. Both interview templates were similar in nature, with the objective of collecting comparable information from different perspectives. Following a review of the findings from the managers and supervisors, it emerged that the internal relationships between the production operators was a significant influence on work engagement. According to the supervisors and managers, the concern of peer pressure when taking on extra discretionary effort was a significant barrier when going outside of the normal routine of the job role. Based upon this feedback, the followership section of the production operator guide was revised to consider this relationship, and its impact on the discretionary effort of the frontline production operator. Questions related to the group-norms of frontline workers were fleshed out as a means of creating further dialogue.

RESEARCH PAPER SERIES

PAPER 4 - FINDINGS AND DISCUSSION

"Exploring work engagement of the frontline manufacturing sector:

A case study approach"

Abstract

The motivation for employees to go above and beyond their mandatory job offers considerable benefits where there's a greater connection to their workplace, and as such are more productive in their daily tasks (Macey and Schneider, 2008). However, employee surveys conducted over the past number of years have found that manufacturing workers have lower levels of engagement than other sectors (Gallup 2012). Although there is no clear evidence as to why this sector scores lowest, a range of factors have been found to influence engagement such as the leadership style, followership, and autonomy.

In paper three, an engagement survey was utilised to measure the current engagement levels with all the production operators in the manufacturing division of Honeywell Aerospace in Waterford. This was followed by a semi-structured interview with managers and supervisors. This fourth paper will now obtain the opinions of the frontline production operators, using a qualitative, semi-structured interview approach. Work engagement is explored through the areas of leadership style, followership and autonomy. Fifteen production operators participated, and the findings reveal that the concept of work engagement is perceived very differently by those participating in the study, varying from those who meet the mandatory elements of the job to those who exceed the job requirements and give much more that would be required from their role.

The impact of the three factors on work engagement is initially explored using the engagement cube (as defined in the conceptual framework). These aggregated findings are then analysed in order to understand the interrelationship between these factors and to make recommendations for the various subgroups which were found to exist amongst these operators.

Introduction

There is much disagreement on what it means to be engaged in work. Associated theories, such as job satisfaction, job involvement, and organisational commitment lead to ambiguity when one tries to explain being engaged. For the purposes of this study, Kahn's (1990:694) definition is viewed as the most appropriate for this research – this views engagement as;

> "The harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances"

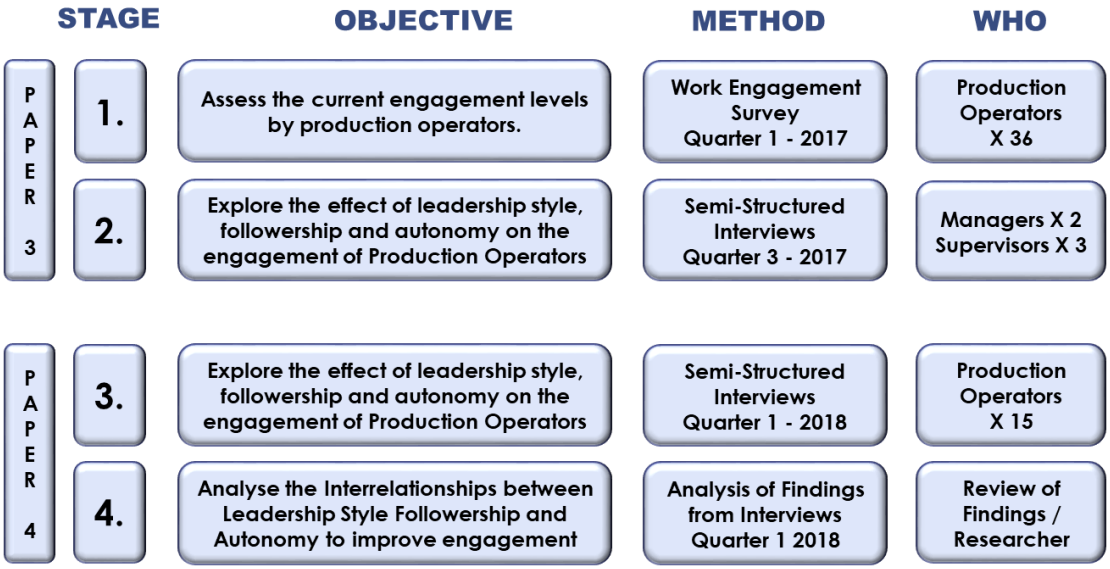
This view of an engaged person envisages the complete person in terms of their physical, cognitive and emotional selves during their work performances, and is consistent with employees, who through their behaviour show high levels of extra discretionary effort, and give more than what would be deemed mandatory for the job (Maslach *et al*., 2001; Bakker *et al*., 2008; Rich *et al*., 2010).

While the majority of previous engagement studies have employed a survey approach, Purcell (2014) outline that case study data, although rare, can offer much broader perspectives on people's perceptions and willingness to engage with the organisation. This study is based in a manufacturing organisation (Honeywell Aerospace) and the focus was on frontline production operators who traditionally have lower engagement levels (Gallup, 2012), and who are often viewed in a passive role with work engagement being driven by the organisation rather than under the control of the employees themselves.

This study was conducted in four stages – two of which were addressed in paper three and the final two which are the focus of this paper. Stage one involved an initial survey of frontline production operators to gather perceptions of work engagement. This was complemented by interviews with two managers and three supervisors (stage two) which revealed some inconsistencies in terms of how engaged the frontline operators actually are. This confusion will be addressed in stage three which will involve interviews with a significant sample of frontline production operators. These interviews will also explore the extent to which leadership style, followership and autonomy influence engagement levels with a view to making recommendations to

increase engagement levels. The summarised research stages are shown below in Figure 20.

Figure 20: Research Stages

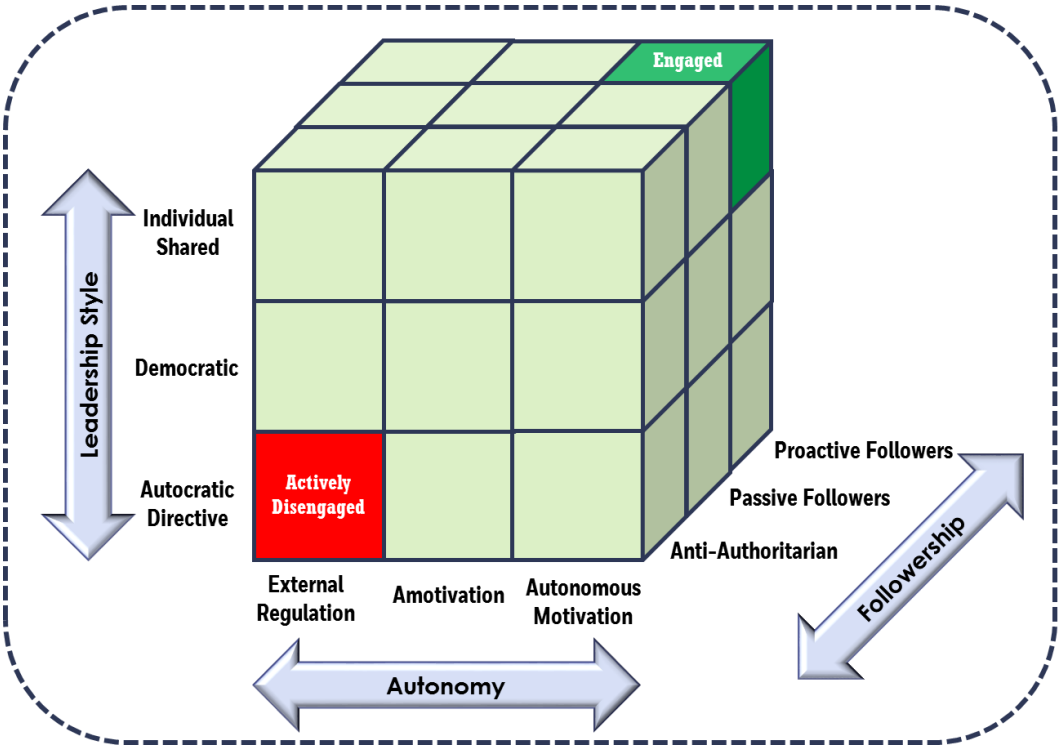


Research Aim and Objectives

Previous researchers have faced questions when attempting to identify the causes of employee engagement, the effect it can have on the organisation, and the appropriate interventions that have the most potential to improve the outcome (Saks and Gruman, 2014). The overall aim of this research is to explore the factors that cause a frontline manufacturing operator to either engage of disengage in their work. The conceptual framework identified three influential factors that were considered significant when a frontline operator chose whether to engage or disengage. These are leadership style, followership and autonomy. As a means of exploring each of these three factors of engagement, and their interrelationship with each other, they were placed on a three-dimensional cube. The "Engagement Cube", as shown below in Figure 21 was developed by the researcher, drawing from literature, identifying the factors as having a significant impact on the frontline production operator when choosing to engage with their organisation. This three-dimensional cube indicates that while all three factors themselves influence engagement levels, and lie along their own scale, they are interrelated. The bottom left-hand block is associated with a more traditional approach

to leadership, followership and autonomy, and as we move along the X, Y and Z axis we progress to a more humanistic approach where the conditions are more positive for increased work engagement levels.

Figure 21: The Engagement Cube



Operational Plan

The aim of the research interviews (managers and supervisors in paper three, production operators in this paper) was to gather different perspectives on engagement levels of the frontline operators. As there were a range of similar issues addressed in these discussions, a starting point when preparing for the frontline production operator interviews was to take the template used with the manager/supervisors in paper three although modifications were made to clarify the real engagement levels of this group (the managers and supervisors had expressed much surprise at the high engagement levels recorded by the operators in the initial work engagement survey (Stage one). Another significant change to the template was in relation to the individualistic nature of what it means to be engaged, with personal examples invited in support of such views. The largest change was made to the followership section, as an inductive finding from the managers and supervisors was that co-worker relationships had an impact on the decisions that production operators would make. Although this was a sensitive

topic, it was felt that it needed to be addressed to understand how peer-to-peer relationships affected the engagement levels (see the interview template in Appendix 1 of this paper).

Operator Selection

A total of fifteen frontline production operators were selected from the population of thirty-six, which comprised of forty percent of the total population, and it was envisaged this would achieve data saturation from this group. A purposive sampling strategy was decided upon as certain individuals may have a unique, different or important perspectives on the subject in question and their participation should be ensured (Mason, 2002; Trost, 1986). A cross section of participants was achieved by taking a layout of the entire production floor, and selecting participants from all areas and all shifts. On average, forty percent were selected from each area and this was important for the research, as it could not be assumed that each production area had similar operating conditions. This selection criteria can be seen in Appendix 2 of this paper. As the researcher knew the participants very well, and had a close working relationship with all of them, bias needed to be carefully considered.

Deliberate selection bias was managed by ensuring an even cross section of participants throughout the plant. There was the risk of insider research bias, and the researchers position in the organisation could impact participants holding back from fully divulging their true thoughts on the subject (Lakshminarayan, 2016). To minimise and control for such biases, certain aspects needed to be considered, such as a good mix of those perceived as positive and negative on the engagement concept, and researcher experience with this group was useful here. It was also important that participants offer their honest opinions and not be fearful or anxious in contributing. The maturity of the frontline operators, their age and the open culture that exists in the company was an added advantage in supporting open and trusting dialogue.

Following the initial engagement survey from stage one of the research, many of the frontline production operators became interested in the subject matter, and readily gave their opinion as to the reasons why they would become engaged or not. On a one to one basis, prior to the official interviews, members from this group gave their opinions openly and freely, often using immediate work examples as ways to justify results from

the engagement survey. Having this insider knowledge of one's own organisation is beneficial, and is what Gummesson (2000: 57) calls "pre-understanding". This refers to the knowledge, the experience and insights people have in their own place of work before they begin their research. Pre-understanding requires more than just knowledge of operations and production, but how the "softer" elements work in relation to the social systems and the ingrained culture that exist.

Pilot Study

To begin the process, three of those selected were asked to participate and these three semi-structured interviews were completed in December 2017. This was considered necessary to ensure that the data collection process both met the objectives and the content was sufficiently explored. Following the transcription of these interviews, a cross check was also carried out on the recording to see if the answers were in line with questions asked, especially on the more sensitive areas. It was envisaged that there could be a possibility that operators would refrain from commenting on the more delicate areas of work engagement, especially in regards to their own engagement levels. The reflection of participant bias was reviewed, especially the possibility of the pressure of a positive response (Burke 1997). This cross check was carried out by listening back to the recording while reading the textual answer to see if operators went into much detail or kept the answers short. A document was drawn up summarising the key themes emerging from these interviews and their linkages to the conceptual framework. This was shared with the researcher's supervisors prior to continuing with the remaining interviews. Based upon these findings and insights, adjustments were made to the interview template, including advice on keeping the questions more open, and more focus on specific issues relating to the connections to work engagement.

The interview template also had some final thoughts on leadership style, followership and autonomy, bringing these factors together and identifying the important issues that could improve engagement in the future. However, after a review of the first three interviews, it was considered necessary to test each of the three factors of engagement on its own scale as to where each participant felt they were in terms of their position on the engagement cube (see conceptual framework, Figure 20). Therefore, at the end of the interview, this diagram was shared with each participant. As the participants would

not be familiar with the engagement cube, each factor was explained in detail clarifying each scale. Each production operator then gave their opinion as to where they believed the organisation to be. Although this was a qualitative assessment on work engagement, it was considered an added advantage for each participant to pinpoint their opinion in real terms on the cube. This then facilitated a discussion on the reasons for such a choice, and this narrative supported the evidence collected from the semi-structured interviews.

Additional Operator Interviews

The remaining twelve interviews were conducted over a five-week period. No more than one interview was scheduled per day and planned in the evening when the offices were quiet, and they could be conducted free from interference with the normal production activities. All of them were conducted in the researcher's own office. This would not be perceived as intimidating or outside the norm, as during working hours, production operators come and go with various production issues, and there is an open-door policy where time is always given to resolving issues as quickly as possible. The timing and location of completing interviews was very appropriate, as the evening shift has less workers and all support staff have gone home, and the office corridor is empty. This quiet and calm atmosphere aided the interview process, as was completely free from interruption.

Prior to each interview, the participant information sheet was shared, and the interview consent form completed. All interviews were recorded at the consent of the interviewee. Initially this was highlighted as a potential issue in a unionised plant, but there were no objections and all were satisfied to allow recordings. The average time for each interview lasted forty-eight minutes. Each interviewee was assigned a random number that was controlled by the researcher for confidentiality and anonymity purposes. Summary details of interviewee profiles is shown below in Table 12. All production operators were over forty years old, and all had more than 11 years of experience. The average participant age was forty eight, with the average service duration of twenty one years.

Table 12: Age Category and Service Duration

Age Category (Years)	Service Duration (Years)					
	< 10	11 - 15	16 - 20	21 - 25	26 - 30	**Total**
41 - 45	0	2	3	0	0	**5**
46 - 50	0	0	4	0	2	**6**
51 - 55	0	0	1	0	2	**3**
56 - 60	0	0	0	0	1	**1**
Total	**0**	**2**	**8**	**0**	**5**	**15**

Data Analysis

Interviews were completed and transcribed by the researcher. Following the pilot study, it was considered if an independent interviewer could minimise the effect of participant/researcher bias. However, on reflection, the actual relationship between the interviewees, plus the management structure and maturity of the participants suggested that there was more to be gained through an open discussion than using an external person with little knowledge of the manufacturing process and associated culture. It was also envisaged that due to the terminology used in manufacturing, the researcher was also in a better position to transcribe the interviews.

The analysis of this data was carried out using Braun and Clarke's (2006) six phase approach used to analyse the managers and supervisor's interviews in paper three, as shown below in Table 13. Each transcript was read by the researcher, highlighting significant phrases and words. This was followed by listening to the recording while placing annotations beside the key phrases. Then on the second reading of all the transcripts, deductive codes were extracted from the data, backed up by inductive findings. NVivo 11 was used to create nodes from the codes extracted from the data. This was a process of abduction (Dubois and Gadde, 2002; Kovács and Spens, 2005) where codes were created from the initial analysis and supported from the original literature that formed the conceptual framework. Text extracts were moved to these nodes in NVivo 11, ensuring that the theme matched the code. Visual maps were drawn up to show the linkages between the codes used, and also supported an audit trail on how the key themes were derived at.

Table 13: Phases of Thematic Analysis

Phase	Description of the Process
Familiarisation with the data	Transcribe, read, re-read and note initial ideas.
Generate initial codes	Code interesting features – collect data relevant for each code
Search for themes	Collate codes into potential themes
Review themes	Check if themes work in relation to coded extracts
Define and name themes	The overall story – generate clear definitions
Produce the report	Final summary – compelling extracts

Table 13: Adapted from Braun and Clarke, 2006.

Stage 3 – Operator Interview Findings

The interview template was broken down into five sections. The first section was designed to get an understanding of what the participant believed it was to be engaged, defining and giving examples of their engagement levels. This section also sought clarification on the findings from the engagement survey carried out during the first stage of the research as the managers and supervisors had questioned the validity of an eighty-four percent engagement rate. The following three sections analysed each of the factors from the engagement cube (Leadership Style, Followership and Autonomy), and the final section discusses the interrelationship between these factors and on suggestions that can lead to improvements on engagement in the future.

Defining Work Engagement

When asked to explain what it was to be engaged, many operators could not really define what it means. Four of the fifteen interviewed asked the question themselves, as Op.15 asked "*It all depends on what engagement is? What is it exactly? Is it just doing your job or what?"* Some indicated that it was the responsibility of the organisation to engage the workers through communication methods, the sharing of information and getting input into the decision-making process. These operators felt that it was more about what the organisation could provide rather then what they could do in their own job. This view was shared by several operators, including Op. 07 who stated *"getting to know everything that is happening, not just at your own cell"*. This was echoed by Op. 13 who said, *"getting involved in everything that effects your job"*, and Op. 06 who answered *"it's not just about pressing a button, but where the company's going"*.

Although the literature views engagement as more than just fulfilling required tasks (Schaufeli *et al*., 2002), it was found that only four of the fifteen agreed with this, giving examples of doing more than would be perceived as expected, *"doing whatever it takes to get the job done"* (Op. 10), and *"just getting stuck in and maximising the days output"* (Op. 05). Four operators believed it was just about meeting daily targets. *"There's a set target for your operation, just meet it"* (Op. 04). Although there were different opinions, there was consensus that engagement did mean to be involved, and enthusiastic, as well as being positive in work. Whereas there was an indication that the term engagement was not understood, the production operators did use words such as pride and meaningfulness when describing the feeling of being engaged in their work. Satisfaction and happiness in the workplace was frequently mentioned throughout the interviews.

> "I think a lot of people are happy in the workforce, I know I'm definitely one of them….. I think people are just happy coming to work here….. It's a marvellous company to work for" (Op. 08).

This left an impression that although the term was not understood, the production operators did believe that being engaged was positive for the organisation. It appears that there is an overlap with other more established constructs such as job satisfaction, commitment, and involvement, as evident in previous studies on work engagement (Saks and Gruman, 2014; Bakker *et al*., 2008; Macey and Schneider, 2008). However, these opinions did indicate that the production operator had a more limited view of engagement, with variations between meeting routine targets to putting in extra discretionary effort to maximise performance. It was clear however that most participants were satisfied with the organisation as place to work.

The Employee Engagement Survey

Eighty-four percent of the production operator group believed that they were engaged in their work when surveyed in February 2017 during stage one of the research. The managers and supervisors were surprised at such a high result, and the frontline production operators were thus asked for reasons for such positive scoring. In reply, they said there was a general feeling that the experience and the conscientiousness of production operators was the driving factor.

> "Well I think a lot of people in here are engaged. They are conscientious in what they do. They don't want to make scrap, and that's a genuine thing. They want to make the product and make it well" (Op. 06).

A theme of pride in the product manufactured was evident, but this did not indicate that the average worker was inclined to go above their job role, or give any extra level of discretionary effort as provided in the actual definitions of work engagement. When pressed about being engaged in their daily job, all but four participants felt it was just about getting their job done, but not doing any more than the mandatory role. The main theme coming through was that many will complete their tasks, but would not engage in extra activities outside their prime job function or with the organisation.

> "A fellow could be engaged in doing his job conscientiously, and meet his daily target but not willing to get involved in any extra work activities" (Op. 02).

In short, it was not seen as a requirement to go above and beyond their own specific role to be engaged. These findings tied in with the production operator's opinion on the definition of what it was to be engaged. Therefore, the true meaning of engagement as defined in the literature was not the same as what these frontline production operators believed it to be and would give some indication as to the high scoring in the survey from stage one.

Leadership Style

Leadership style was considered an important factor in the engagement of production operators because the leader who establishes and builds relationships and takes their followers opinions into account can achieve much higher levels of work engagement than strictly focusing on task performance (Carsten and Uhl-Bien, 2012). This section attempted to get an understanding of the key leadership factors that influenced a production operator when choosing to engage in their work. Three core themes were apparent in terms of the relationship between managers, supervisors and production operators. These included social exchange theory, where those who perceive that the organisation has high levels of fairness will reciprocate in terms of the way they carry out their role (Cropanzano and Mictchell, 2005). Saks (2006) suggested that perceived organisational support, procedural justice and supervisor support created a positive environment where the employee felt that they were motivated to repay the organisation

through their work efforts, and this voluntary participation often originated from the direct relationship they had with their supervisor. This relationship often feeds directly into the decision-making process and is also seen as a positive step towards engagement. Being recognised for going above and beyond their role was a factor that influenced the majority to engage in their work, although the nature of the reward type had mixed opinions.

Fairness

The production operators opinion on how they are treated by supervisors and managers influenced their decision to engage in extra activities in work. A number commented that when they were treated fairly in work, they felt like returning the favour in how they carried out their tasks. Op. 12 commented, *"You know [supervisor], he lets me manage my own work area, and I get the parts through and never let him down"*. This feedback indicated that the employee felt that he owed something in return for the trust and fairness in how he was treated. Many felt that although there was a good personal relationship between those in authority and the production operator group, it was the inequality between different individuals that caused dis-engagement. These felt that certain operators get more favouritism than others, and this feeds into apathy and a divide among group co-workers. This has the possibility of creating a poorer working environment, with less trust among the team. Examples were used highlighting areas of the plant that receive far more attention, or separate treatment in relation to such areas as overtime, time off and shift flexibility.

> "You know what is key – it is equitable treatment. I don't mind if a manager is dictatorial or easy going once he is the same with everyone. But what you see here sometimes is double standards, and that disillusions an individual, so it makes him less willing to give more than the minimum requirement" (Op. 02).

Decision Making

Several operators pointed out that when supervisors and managers are making decisions, they don't consult the affected group, and there are often better ways to solve ongoing issues. It was indicated that once a decision has been taken, managers and supervisors are reluctant to change their mind regardless of other possible solutions put forward by the individual. It would be observed as setting a precedent or doing a U-

turn, although in many cases there are other viable options that can come about through discussion and consultation.

> "Once a decision is made, the decision is made! No matter what someone may come back to you with and say, there's other circumstances here that I feel there are other ways – it doesn't matter" (Op. 03).

There were operators who didn't agree, believing that it is not possible to accommodate all opinions coming from the production group, and it was managements responsibility to make business decisions. In many cases getting consensus among a group of production operators in relation to a shift change for example may not be possible, and therefore the supervisor just needs to step in and make business decisions where necessary.

> "Look -people's considerations are taken into account to a certain extent. It's not like a despotic regime in here or anything. There is leeway. If people want time off then they work around it, so there is fairness in here. At the end of the day it's a business that has to be run" (Op. 15).

Although there were conflicting opinions in relation to the decision-making process, and the involvement of production operators managing their own work setting, a theme of greater involvement was evident as something sought by many operators. Many examples were offered such as Op. 04, *"I explain to [supervisor] the sequence we need to run the product, and he accepts that I am experienced enough to know best, so lets me get on with it".*

Much of the discussion around communication and the methods used appeared to point towards individuals desiring to be kept informed on changes taking place in the organisation and ongoing plans that affected their own work area. In the initial questions on the definition of engagement, some operators mentioned the word communication, and the need to be involved in the process. Having an input into their own job function was found to create a shared ownership and thus they felt more important with a desire to engage more.

> "Being made feel involved. You know the way you may come along and show us the schedules and what's the plan, the sharing of this information with us, that is being engaged. To me it's important to take our perspective on things as well" (Op. 07).

This involvement extended to the operators having more say in how they managed their own work area without the need for supervision. When an employee is given more opportunities to self-manage, they will perform better in a work setting (Wong Humborstad *et al*., 2014). It is a form of joint responsibility. Good leaders delegate responsibility, eliminate formal policies and remove conditions that foster powerlessness (Van Dijke *et al*., 2012).

Recognition

Many years ago, the organisation had a reward and recognition system where employees could submit improvement projects and if deemed feasible and successful, they would share in the profits. This was changed in 2010 and replaced with a new system where rewards had a fixed monetary value. This was to focus on continuous small suggestions where the production operator could implement changes themselves. During the interviews, rewards and recognition for going the extra mile had mixed opinions. Some felt that if one is prepared to go above and beyond the scope of their role then there should be some reward for doing so. The type of rewards now put forward varied from small token gestures to a more substantial monetary reward in line with the potential savings made by the employee.

> "The current rewards and recognition is not the same, as if you were here back when we had the system of rewards where people would come up with cost saving ideas and share in the rewards. These rewards were fantastic because it was based upon a percentage of the savings" (Op. 01).

Others felt that the current recognition system has become biased where the same individuals seem to receive rewards all the time and dis-engages other employees. It is possible that this viewpoint comes from those who seldom receive formal recognition, as they do not give extra effort to their job. On a related point, there were some who felt the current system was not transparent enough, and thus many believed that the same individuals always received the rewards.

> "I think our reward and recognition is very biased. I'd say if you looked at the number of individuals who are getting them, they would be the same few all the time. There should be a chart or something that displays these figures" (Op. 02).

Of course, this may be the case anyway, as the same individuals probably tend to put more effort in and therefore are the ones receiving this recognition time and time again. One point that was shared between all participants was that a gesture of "thank you" is not utilised enough in the organisation. Nearly all respondents agreed that when supervisors or managers acknowledged someone for extra effort, it was highly rewarding.

> "Regarding the current small rewards, I think there could be more of them. It's nice to be thanked for what you've done. There was an initial focus on it, a spike early on probably 2 years ago, and then it petered off somewhat" (Op. 06).

> "Appreciation – it's good if you do a favour for someone or something out of the way and get a free lunch. It's better than nothing, and it's the thought that counts. A thankyou often goes much further than a free lunch" (Op. 08).

Although there were differing opinions on rewards and recognition, including both the need for them and their value, it was clear that the relationship between production operators and supervisors was key in achieving high levels of engagement. According to the majority of those interviewed, it was this relationship, and the frequent one on one meetings in production that drives engagement. Personal opinions are taken on board, and this feeds into good relationships, especially where production operators have a wealth of experience and know their job in detail. This recurring theme had close similarities to social exchange theory mentioned earlier, as it appeared that the participant wanted to give something back in response to being recognised for doing a good job. As Op. 13 stated, *"I think we can do far more in recognising people for their efforts, it keeps you going"*. This is related to recognition, as many felt that it can have a contagious effect, in that if managers and supervisors show more appreciation when someone goes further, you will get continuous repeat occurrences.

> "As I say its human nature where some are going to get stuck in while others are not. It's not that you want to drive yourself crazy over the small percentage that are not going to chip in, but probably need to turn around to the lads who will do the work and recognise them for it" (Op. 06).

Although mixed opinions, the clear majority believe that there are many forms of recognition where managers and supervisors could come up with ways to encourage further engagement in work. All participants thought that verbal recognition needed to

be used far more when production operators did something extra. There were also a few opinions where production operators believed there should be a system where recognition could be given from peer to peer.

> "It would be good if this type of thing [peer to peer recognition] could be done there and then and not have to get escalated up the chain for approval. It's just a matter of trusting people. It would be very interesting to see who would use it" (Op. 14).

Several pointed out the difficulty in having a fair and balanced system due to the subjective nature of a reward and recognition system, but that should not deter leadership from exploring different ways of acknowledging positive behaviours in work.

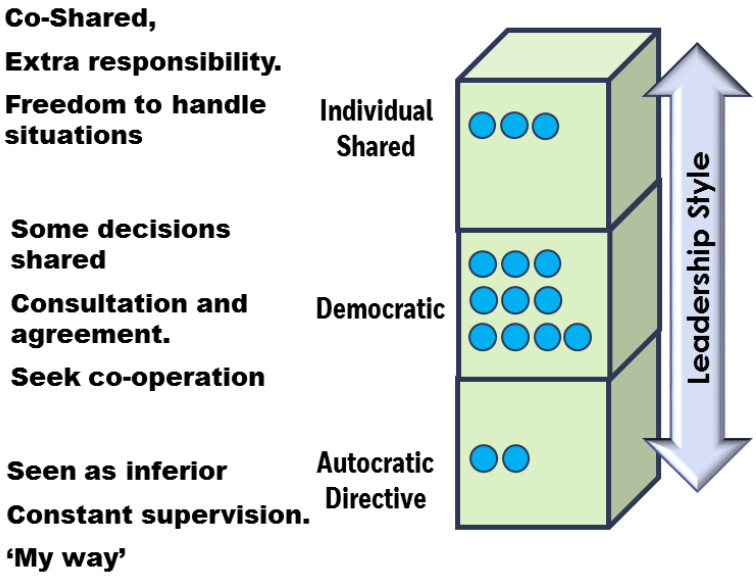
Leadership Style and Work Engagement

The style of leadership as perceived by the participants was then identified on the engagement cube. The majority felt that leadership style scored in the centre, as there was a certain amount of consultation and seeking cooperation between production operators and leadership. Three of the participants did believe the organisation was in the top sector citing examples of making decision themselves based upon the information available (see Figure 22).

> "I think we are more individually shared. I don't think there's a problem in us making some decisions ourselves. If [supervisor] wasn't here today and we had work to do, I think we could organise this ourselves" (Op. 09).

Only two participants believed that the organisation took a very directive or autocratic approach, citing examples where operators input is not requested by supervisors, and engagement would be much higher in the organisation if more emphasis was placed on the production operators experience and willingness to share their ideas. As Op. 03 stated, *"Some people think its them (leadership) and us (production operators), but we all work in the one space, the barriers need to be broken down."* The involvement of followers in the leadership process has benefits, but also is time consuming and can require a huge amount of effort to get workable results (Uhl-Bien *et al.*, 2014).

Figure 22: Leadership Style Rating



Followership

The followership section was included to get an understanding of the levels of participation and collaboration of the frontline production operators with their supervisors and managers. This relationship to their work may be observed as a proactive follower who speak up and want to have their ideas acted upon in collaboration with their managers, or a more passive approach where they follow instruction and refrain from any further involvement than just completing their mandatory role (Uhl-Bien *et al*., 2014). On the other hand, their perception could be much more damaging in that their role is perceived as anti-authoritarian and any support given to the organisation is perceived as collaboration and not popular with fellow colleagues. This is not how individuals behave relative to their work, but relative to their working environment. The questions were based upon the personal circumstances of each participant in relation to their own willingness to go above and beyond their own role. A recurring theme emanating from this section related to co-worker support emphasised by peer pressure conforming to generic group norms. Differences were evident on how individuals perceived group norms and the impact co-worker relations had on the production operator when making the choice to engage in extra discretionary effort.

Co-Worker Norms

Co-Worker norms keep individuals within certain boundaries during work. Feldman (1984: 47) defines group norms as "the informal rules that groups adopt to regulate and regularize group member's behaviours". These can be negative for the organisation and can place a ceiling on engagement. On the other hand, these norms could be positive in that they can create competitive pressure on weaker workers and in effect make them raise their game. Barker (1993) call this theory "concertive control", and points out that there is a powerful combination of peer pressure and rational rules in this system of working.

Group norms were identified as a key theme during the manager and supervisor interviews during stage two. Based upon those findings, the production operator interview template was modified, and included several questions related to group norms and co-worker relationships. The production operators work in a unionised environment. There appears to be good employee relations, with no form of union grievances in many years. There are however many group norms that have developed over the years in relation to the general terms of union agreements. Such items, as the scope of a production operators role, and area of work including mandatory completion of documentation, the output targets and related items such as the completion of basic machine checks. It is in this backdrop, and especially that this is a unionised environment where boundaries tend to be set.

There is a certain amount of peer pressure applied for workers not to step outside of what would be regarded as the acceptable behaviours in relation to such areas as production output and non-core production support activities such as doing basic maintenance activities on their own, or completing data that may be perceived as the responsibility of supervisors or engineers. Therefore, production operators would be uncomfortable in stepping outside of these, regardless of their own individual motivations, and generally inform themselves through their shop stewards or another more experienced production operator.

> "People will inform themselves and find out. If they think – hold on a second – am I off-side here and 90% of the time will make sure they are on-side. If not sure, they would come to a representative and check. I've been asked to do A, B and C. by my supervisor, is this ok?" (Op. 01).

It is apparent from these quotes that production operators would be very careful in not rocking the boat and would always err on the side of caution when deciding to do something outside of what they would perceive as the norm.

> "Your bound by union and company agreements. So there is certain things that you might have to check with the union reps just to run it by them, as I don't feel comfortable doing that" (Op. 11).

Some cited examples of being asked to complete tasks that they perceived not to be part of their job responsibilities. During the manager interviews, they did not believe that union rules and agreements had an impact on the engagement of the production operator, but there was disagreement on the side of the operators. There were several instances where production operators gave examples of going the extra mile and exceeding the normal production target, only for it to be frowned upon by others. As Op. 02 pointed out;*"The target is easily achievable, but many would not feel comfortable doing more – are you undermining your colleagues?"* This viewpoint was supported by Op. 11 who said, *"Do you think it would look good if my output for the shift was way above [operator X] on the machine beside me?"*.

Co-Worker Support

Several operators indicated that although going outside the norm may be frowned upon by many of their co-workers, it is purely a personal issue, and it is up to the individual to make those choices themselves. But it can be of great concern for a frontline worker how their co-worker perceives them. Therefore, self-esteem and self-consciousness are important factors for them to feel safe in performing their daily tasks. It is the strength of the individual, in these cases, where some will always inform themselves, and can be very conscious of what others may think. Others stated that they didn't care what others may think, and have the strength and freewill to make their own choices in relation to the extra activities they take on.

> "I just go ahead and do it. I don't care what others may think. I know I don't have to do it, or won't be made do it, but that's not the point" (Op. 05).

> "I certainly do think that there are many workers in here who would not do certain jobs as they would be afraid of getting commented from a small group. There are small groups who like to ensure people don't go

> outside the norm, and this probably affects certain individuals. But it doesn't bother me" (Op. 13).

There tended to be two separate groups within the interviewed operators, one group who always check if they are working inside the acceptable limits or norms, and the other group who just get on with the job, and take on any tasks requested of them. Many of the second group would not need to be asked in the first place. These tended to be the same production operators who defined work engagement as going above the standard role of the job. One production area was highlighted where the shift workers were given far more freedom to decide how to meet the production targets and came up with their own plan to meet these objectives. As Op. 14 stated;*"I like having the freedom to manage all aspects of my own area, including the overtime"*. This was corroborated by Op. 11 who affirmed, *"allowing the new area to control their own working methods even surprised me, and many of us didn't believe it would work."* This appeared to be a positive step, and one where even those who showed lower levels of engagement believed that this flexible way of working was much more progressive and had the potential to increase engagement levels.

Self-Management

Several frontline production operators discussed the differences between individual operators, where some just came into work every day with a great work ethic, while others needed to be supervised constantly. Many put this down to the individual and their propensity to become more involved or sit back and only complete the mandatory task associated with the direct job. Several participants did suggest that working below the standard also brought undue attention from both supervisors and co-workers, as while it may be unpopular to out-perform your co-workers, targets were linked to the monthly bonus, and this was paid to the entire group. Therefore, there were also factors that required one to achieve output targets.

The key point here is the discretionary nature of engagement, and the difference between meeting the mandatory requirement of the job or giving more than required. It emerged that those who are more willing to contribute get asked time and time again, as they would be seen as more approachable and willing to help out. Those who tend not to put themselves forward are left only to do their own job.

> "There are two ways of looking at this. The man that has nothing to do will gladly do something. Or the fellow that has nothing to do will say, well it's not up to me to find work, that's the responsibility of the company" (Op. 14).

There were production operators who believed that work engagement only went as far as the mandatory elements of the job, but a small number of production operators believed that the group should be more mature and manage their own work area without the need for supervision. They did accept however that small groups did like to pressurise those who gave far more than was expected to their role.

> "You get a bit of that [slagging] alright. But again, I think people are mature enough to get past that. If I feel like doing something, then I'd go ahead and do it anyway. That's how I feel about it anyway. If something came up I put myself forward" (Op. 06).

This finding appeared to link in with the need for supervision, as although it was stated many times that supervision was only required to facilitate production, there were many instances noted where groups of production operators would not engage in completing their work without constant intervention from supervision on output. A direct link to being either engaged or disengaged, and a finding that was also part of the managers and supervisor's opinions when discussing these differences. This can lead into equitable treatment, a term already discussed as part of the leadership findings, where those who disengage get left alone, while those who give more effort are always selected.

> "It's like a democracy, isn't it? Like I was saying, if you were willing to take on more then you are more autonomous in that role. But do you do that in isolation? If there's six operators and five of them don't want to do it, where you do, it's a situation you don't want to be in" (Op. 02).

This point was made by three participants, where although they were willing to give more to their work, felt a little uncomfortable putting themselves in a situation where the majority rule existed. There was a strong link here to Kahn's (1990) theory on the psychological condition of safety, that's the ability for the employee to carry out their work role without fearing negative consequences from their peers. In this case, it operated like a type of job capping system, with the majority in favour winning out.

Followership and Work Engagement

The participants then identified their position on the engagement cube in relation to followership, and their collaboration and participation with the organisation (see Figure 23). Ten of the production operators felt that they were closer to the top in terms of their pro-activeness of doing their job. Many pointed out that they knew what was expected of them each day, and completed their work accordingly. However, this did not include extra activities outside their own job role and this matched the majority regarding the original definition of engagement. There could also be a certain bias here, as even those who showed examples of being less engaged in their work still rated themselves higher on this scale.

> "For participation and followership, I would say I am very much proactive in that I will act on my own ideas and get on with my work. I don't need managers or supervisors to tell me what to do, or either should anyone else" (Op. 05).

Four operators did comment that although they were experienced in the job, and knew how to resolve problems or decide what to do next, they tended to rely on direction from supervision, and would not exceed what they deemed was the mandatory role to complete their work. As Op. 15 stated, *"Some can work harder than others, but don't get any benefit from it, we are all on the same money so why should I put in extra effort?"* It was suggested by three of these participants that the more you gave to your role, the more that was expected from you, and therefore it was better to stick to the agreed work task only.

Figure 23: Followership Rating

Autonomy

The third section looked at how much choice and decision making ability production operators had during their working day. The interview template concentrated on the type and extent of controls that impact production operator's ability to engage in the workplace. Autonomy has been mostly researched under the Job Characteristics Model (JCM) (Hackman and Oldham, 1976). External regulation is control based where the worker is either motivated by an external incentive or a negative consequence, such as being watched by a supervisor. This approach has been associated with the traditional style of supervision, while autonomous motivation is associated with a more humanistic style and intrinsically based where one finds the work enjoyable and interesting (Hardré and Reeve, 2009). In the centre is amotivation relating to a person who is neither intrinsically nor extrinsically motivated and just completes the mandatory elements of the job without any real engagement and poor employee functioning (Gagné and Deci, 2005).

Autonomy as an engagement factor was deemed important for two reasons. One, the process itself is highly regulated so it would be curious to see if processes that are standardised impede the production operator from expressing themselves and offering higher levels of engagement. The second reason is that autonomy extends to the motivational aspects of work, including the ability for the employee to have competency levels across several tasks especially in a lean manufacturing environment where product flow is a vital element. The level of autonomy can provide the freedom and discretion for production operators to have total control over their work area and thus a more flexible working environment. Several studies have confirmed that increased flexibility can boost the innovative behaviour of employees and therefore their engagement levels (Kelliher and Anderson, 2008).

Job Standardisation

The ability for a production operator to schedule one's own work scored low in the work engagement survey from stage one, and those interviewed mainly agreed with this referring to fixed or standardised processes as the main driver. In other words, you can't decide yourself what to produce next, as the production schedule comes directly from the customer requirements, so whatever is planned from the schedule must be

processed. This is compounded even further with the introduction of lean operational techniques, where the amount of inventory is kept to the absolute minimum, with the goal of producing to a single piece flow.

> "I think that is [cannot schedule your own work] called correctly. We don't really have any control over what to run. You have to process what comes to you. You don't have a choice in how the product flows" (Op. 05).

The production of aircraft engine components go through a stringent manufacturing process, involving many standardised and fixed processes. By the very nature of production and need for product conformity, there are strict operating parameters that must be adhered to. This is also a significant factor for ensuring parts meet the Federal Aviation Administration (FAA) standards. All production operators agreed that this would affect the freedom to sequence work tasks, but also acknowledged that it was an essential control due to the business we are in. However, this didn't have a negative impact on engagement levels, and many felt that having clear guidelines on how the job was run was important for consistency and repeatability.

> "You are restricted by the process, and have to follow rules, and rightly so, as that's what they are there for. You can't really change that, not in the business we are in anyway" (Op. 06).

> "I don't think the standardised process is a problem, that's just a fact of life. I wouldn't see it as a negative that there is a planned structure there for it" (Op. 07).

Although fixed processes can impede the ability for one to have complete autonomy over their role and limit individual expression, this was not seen as a negative factor in this study. It looks like this type of control is not only taken for granted in this business, but those who operate under these fixed conditions are more comfortable. This stems from the fact that process repeatability is a key requirement in this industry. This offers a certain amount of self-protection for the production operator who by following clear and standardised procedures will know that the product will meet the requirements, and they will not be held responsible if variation occurs in the process due to other undefined circumstances.

Work Skills and Flexibility

The average years of service of the production group is twenty-one. Although this has a positive effect on experience levels and the inherent and tacit knowledge of doing the job, it frequently led to operators lack of motivation to learn new skills.

> "Look, I'm here 30 years and have no interest in learning other areas. I am kind of set in my ways and I'm fine. I am in this area now and wouldn't like to go anywhere else. Just happy enough" (Op. 10).

There was a consensus that the frontline production operator was satisfied in the job they currently did, and were not interested in starting to learn a new job again. There was some indication that this reflected their age, and their many years of service, but this also stemmed from the comfort factor in doing their own job, and the fear of change. This has a close relationship to the autonomy one has because if you are only trained in a single discipline then you do not have the flexibility to move to a different area based on the flow of product.

> "You see, there's no benefit. Why should you go out of your way to learn a different job when you're comfortable in what you are doing. I don't like change. I've never liked change. In a way I'm conservative. I don't like the stress of having to learn new things" (Op. 15).

This view does need to be challenged, as there are several benefits for the organisation for a more cross-trained and flexible workforce. There are also benefits to be had by the production operator in terms of job enrichment. Higher levels of "role breath" has been found as more positive for employees, and facilitates them in taking charge of their work area (Dysvik *et al*., 2013). There was a small number that did like to try new things, and it appeared that these same operators were the ones always chosen when new processes were introduced. This reflected an earlier finding that those who were more willing to put themselves forward usually get selected. Again these tended to be the operators who defined engagement as going above the requirements of the job.

> "So maybe it's because I'm just the willing horse, and never mind, and will just facilitate moving to any area asked. This is what happens in this plant, there are those who will facilitate and those who will find reasons why not to move" (Op. 14).

Many operators like to have a "core" work area, and although are not against training in new tasks, it is viewed as a change that many are not willing to put themselves

forward for. In many cases those who are more willing to help out, get called for too many jobs, and those who react negatively are left alone, and that may be more suitable as there are no extra benefits for training in new areas. This is an interesting finding, as the ability to be trained in two or three production areas offers so much flexibility to the organisation and therefore an incentive to train in new areas would be an advantage.

> "I think I've gone past training to be honest with you….I suppose you are in your comfort zone maybe. If you come out of it, it would take some time to get use to another new area" (Op. 09).

Several participants did like to learn new things, but in these cases felt that it was in everyone's interest to make sure these new skills complemented their current roles. Two operators gave examples of being moved to completely different areas, outside of where their core skills and experience was. For example, if an operator was already trained in a machining cell, have him trained in an adjacent machining cell that was more relevant to his core skills. One operator explained that by learning job tasks in the production process immediately before his, he could do this now when he got run out of product, both helping himself and the operator on the cell beside him.

> "There is no point in me stopping what I am doing because there is no one there to feed me parts. Now I can move between operations. But I will say one key factor on receiving further cross training, the area must be relevant to the current jobs you do, and where your skills lie" (Op. 05).

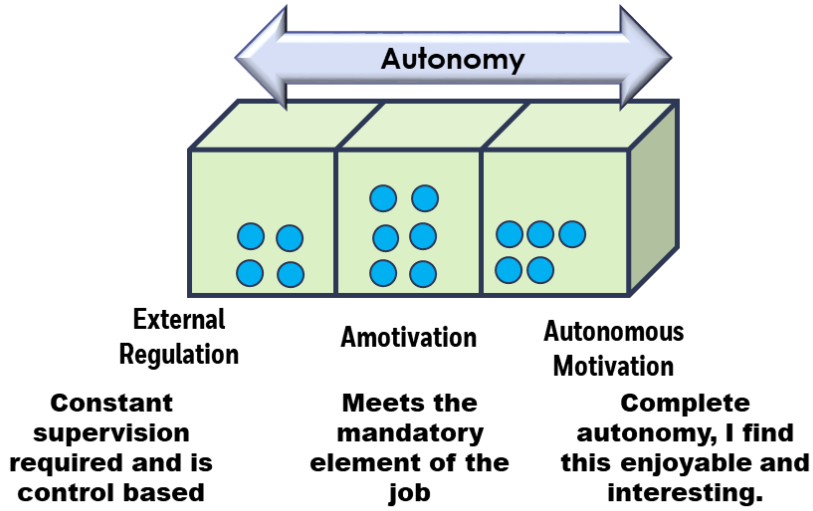
There are associated benefits with this type of learning on two levels. It expands the role of the operator outside of his comfort zone, and in doing so, provides further team building among the group. It would also have a positive stance on engagement, as adjacent job tasks will be better understood and therefore have an impact on quality of process and product.

Autonomy and Work Engagement

The participants then pin-pointed on the engagement cube how much autonomy they perceived they had as shown in Figure 24 below. Autonomy was much more evenly spread. Although the standardisation of processes was acknowledged as not affecting engagement levels, when it was scored it did rate lower, and this tied in with the term external regulation and the need for control. The scoring in the middle appeared to reflect the frontline operators that had many years of experience, and although believed

that they had adequate autonomy to do their job, it was routine and had no great interest in looking to cross-train in other areas. These participants didn't feel the need to put in extra effort, and it suggested that their age and tenure with the organisation was the driving factor. A similar number of operators found what they did was enjoyable and interesting and also put themselves forward for other related job tasks as they came up. These same individuals were the ones always selected for new work areas, and also received more rewards for doing so.

Figure 24: Autonomy Rating

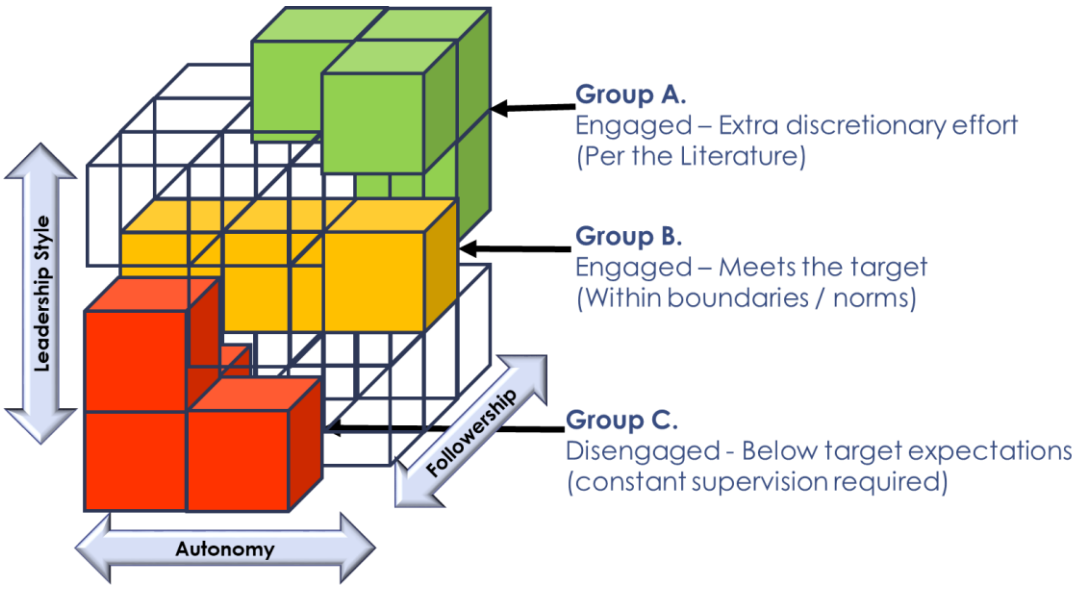


Stage 4 – Work Engagement and Factor Interrelationship

Each of the three factors of engagement were reviewed individually, and rated on their own scale as to the effect they had on the engagement levels of the frontline production operators. The final section of each interview discussed this interrelationship between leadership style, followership and autonomy, seeking to understand the effect all three factors have on the frontline production operator when combined. The researchers preferred definition of engagement included extra discretionary effort. Therefore, combining the factors, that motivate a worker to give extra effort to their job, and in doing so improve their performance was key to this research. Building on Vroom's expectancy theory (1964), Porter and Lawler (1968) argued that a complex relationship exists between satisfaction and performance where effort or motivation does not necessarily lead to performance. The amount of effort applied is based on value of reward and reward-effort probability. This effort is determined by the perception of the

employee on his/her role. In turn this performance leads to satisfaction, and is dependent upon the actual reward. These rewards may be intrinsic or extrinsic. This model had linkages to themes emanating from the final part of the research. Three groups were identified following the analysis, as shown below in Figure 25. Porter and Lawler's motivational model can be seen in Appendix 3 of this paper.

Figure 25: Aggregated Engagement Cube



Group A – Engaged – Extra discretionary effort

Group A are already engaged and it appears that those who show high levels of engagement are the same operators who are prepared to get more involved in the process, have more skills and frequently put themselves forward for new tasks. These same individuals are not influenced so much by their co-workers, and through their ability to give extra effort to their job tend to receive more recognition in the form of monetary rewards but also recognition in the form of overtime and shift flexibility. It appears that these operators are also aware that their extra effort is appreciated, and overtime and recognition has value, thus are prepared to continue giving extra discretionary effort to their job, although not mandatory. These are also generally satisfied with the organisation, and like to be involved in extra work activities than just completing their work function. These operators like to have a good relationship with their supervisors and indicate their need to be kept informed on changes, both taking place in their own area and across the organisation.

Group B – Engaged – Meets the target

Group B were classified as engaged – meeting the target and expectations of the job. When aggregated, this is the largest group, and accounted for nine of those interviewed. The theme emanating from this group was they were prepared to do their mandatory job, and were generally satisfied with the organisation. They wouldn't however put themselves forward for work outside of their normal routine, and preferred to remain in their current role. These operators would check with their union representative or another colleague if they were asked to do a task that could be deemed outside of the standard job. Some of these did rate themselves higher on the followership scale, and this position was more in relation to the experience they had on their own job, and ability to meet the standard target, rather than giving extra effort. These were satisfied that their opinions were taken on board, had a reasonably good relationship with their supervisor and liked to be kept informed on issues that affected their own work area. This group did not like to put themselves forward for training in new work tasks, although accepted that if asked would facilitate, as was part of their contract.

Group C – Disengaged – below target expectations

Group C were classified as disengaged. This group, the smallest, accounting for only three of the participants and indicated lower levels on all three scales. This group would prefer to stand back and only give the minimum engagement to their role. They are very much aware of what their co-workers might think of them if they are seen to participate more in their work or offer higher levels of engagement. They believe that it's not popular to give extra effort to their role and comments used were related to an impression that they did what they were paid for. While this comes through in comments on union and group norms, it doesn't appear that any significant agreement conflicts with an operator who is prepared to give extra effort in their role. An underlying factor may be related to self-consciousness or self-awareness where they are concerned how their co-workers perceive them, and this leads to dis-engagement.

Recommendations to Improve Frontline Engagement Levels

Historically organisations used a few formal leadership interventions to exert influence, but this approach can be replaced by a more relationship process and shared way of working (Chrobot-Mason *et al*., 2016). One of the main definitions of work

engagement was that the individual identified strongly with their work team and organisation (Kahn, 1990). The proposed interventions need to take account of the individual, their propensity to engage and their own perception of the organisation. In other words, it's not a one size fits all approach that can have the most success. Three groups have been identified when the findings are combined. The lines of delineation between these groups are not clear-cut and sub-groups can be evident. Table 14 below summarises the appropriate interventions as defined by the researcher and supported by the engagement literature and findings.

Table 14: Group Interventions

Leadership Style	Group A	Group B	Group C
Fairness	Adapt communication process so all get a single message in relation to key information across operations.		
Decision Making	Further information on plant metrics.	Give more freedom to make decisions on work issues.	Maintain direction and identify those willing to go beyond.
Recognition	Total review of reward and recognition program. To include peer to peer recognition. Transparency through communication.		
Followership	Group A	Group B	Group C
Co-Worker Norms	Support only	Identify the contentious areas for participation.	Manage mandatory work elements only.
Co-Worker Support	Can support those in Group B.	Support through close 1:1 meetings, clarify issues.	Basic understanding of position and possible explanations.
Self-Management	Support only	Support those willing to manage their own area	Mandatory work tasks with formal measurement.
Autonomy	Group A	Group B	Group C
Job Standardisation	No Action	Job Enrichment in associated work areas.	Direction Only
Work Skills	No Action	Develop incentives	Core area only
Flexibility	Use as trainers for group B & C	Incentivise operators with 3 work areas.	Mandatory for 2 work areas.

While it is not a one size fits all approach, there were two areas identified where uniformity among managers and supervisors is needed to apply a common approach across production. Although it may be natural to target those who engage more, ensure no exceptions. The second area requiring a common approach is recognition, as it appears that the reward and recognition system has become stale, and not working as intended. Carry out a complete over haul to include peer to peer recognition and make the system visual so all employees can see who are getting rewards and why. This will make the process more transparent, and give those who may not believe that they are part of the system an opportunity to receive potential recognition in the future.

There are very few interventions required with Group A, either than continuing to provide them with good information on plant metrics so that they can continue to make informed decisions on managing their own work area and in doing so maximising their performance levels. This group can also have a positive impact on Group B, and act as role models in how to get the most out of their role. Intrinsic and Extrinsic rewards need to be maintained through positive interactions and appropriate recognition that is fully transparent and perceived by others as equitable as noted in Porter and Lawler's motivational theory (1968). The value of the reward needs to be equal to the perceived effort required, thus having an influence on Groups B and C.

Group B has been identified has having the most potential in improving the engagement levels. Give them more opportunities to made decisions on improving how tasks get completed. Share more information and trust them to make decisions that will meet the plant metrics. The focus of followership interventions needs to address the group norms with Group B. It is important to understand the areas of contention, and address through close one to one individual support. There may be a need to complete a review of areas where production operators feel uncomfortable in contributing, and get a better understanding of the relationships at ground level. This area probably offers the most potential in gaining higher levels of engagement. Give those willing to be more involved extra support in terms of flexibility. Examples here would be managing their own overtime, or shift changes to meet the production plans. Self-management was viewed as a positive step in a number of the interviews, and therefore has the potential to have a positive impact in many of the production areas. There needs to be an incentive to cross train in other areas of the plant also. Age may be a factor here, but

it's not necessary a barrier once the cross-training can be done in areas directly related to one's core skills. This would be a form of role expansion, and may have benefits for the operator also in terms of increased knowledge of the process.

The operators in Group C must not be excluded from this process, and although may not show a willingness to contribute above the basic role and feel it not popular to engage, need to share the workload through direction and mandatory compliance. This would have the impact of a more fair and balanced process. This group may just require a more direct supervisory approach, more suited to employees that need more control and external regulation. It would not be viewed as equitable if some employees could opt out due to their perceptions of what it means to engage, as may affect performance levels in Groups A and B. That said, there's no reason why those in Group C cannot contribute more, if some of the factors relating to their fears or concerns were understood better, and probably worth exploring further in the future.

Conclusion

Work engagement has become one of the most popular topics in human resource management studies over the past ten years, and more recently in human resource development (Saks and Gruman, 2014; Valentin *et al*., 2015). This was an exploratory study, where the richness of interview findings has been quite rewarding and offered a much deeper and broader perspective on the engagement concept. This research was carried out with those who work together every day in a busy production environment. Completing formal interviews with direct reports was a rewarding experience. At the end of the interview process, there was a good sense of satisfaction and a belief that the participants were sincere and candid in their responses, even though at times the information sought was sensitive. Age and tenure of the participants was an advantage in achieving such open dialogue.

As the researcher was a member of the leadership team, and a direct manager of the production group, it was identified early that managing bias was going to be a significant challenge. The topic of engagement itself can be quite sensitive, as the production operator is being asked for their opinions on their motivations to go above and beyond their job tasks. Due to the researchers position in the organisation, ulterior motives were a potential stumbling block in the collection of data from interviews.

Production operators “holding back” was also considered a possible issue, especially where the participants are giving their opinions on their own levels of engagement. The relationship needed to be positive for success. Practical measures were addressed right through the research process, including continuous communication between participants and union shop stewards. Organisational maturity did make the research more effective, and facilitated participation from all operators.

The findings would suggest that work engagement may be at a satisfactory level in the organisation. The engagement concept itself is perceived differently by those participating, where some believe it to be going above and beyond their role, while others feel that meeting the mandatory elements of their job sufficiently keeps them engaged with the organisation. This behaviour has a close relationship to Expectancy Theory (Vroom, 1964) where an individual has choices, and make decisions based upon the best possible outcome. Lawler and Suttle (1973) argued that the choice an individual made in relation to their work was associated with achieving a successful outcome, and this may be deemed satisfactory.

Prior to commencing the research there were questions that needed to be answered in relation to the choices production operators make during work. The interviews carried out in this paper, and their findings has strengthened some core beliefs on the engagement concept. Unexpected findings have raised tangible suggestions that can be applied in the future to improve the engagement levels in a manufacturing environment. As pointed out earlier, one cannot use a one size fits all approach, as significant differences were apparent in how individuals perceive the engagement concept. Of course, there is also limitations involved in grouping workers into categories. However, in order to have the possibility of the desired outcome of increasing engagement there needs to be objective methods to target the areas identified from the findings. As engagement is an individual concept, managers and supervisors need to tap into personal needs, getting beyond the daily tasks and having the ability to adapt the leadership style in supporting, coaching and mentoring each employee. This allows the production operator the autonomy to take ownership of their own job, and want to participate and collaborate with the organisation. This in turn can have a positive effect on working relationships, making the organisation not only perform better, but an improved climate to continually develop and grow.

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Appendices

Appendix 1 – Interview Guide for Production Operators

Date:		Time:	
Interviewee No.			

Background of study and participant

Explain the background to the study and the reasons why it is of interest. Explain why respondents' perceptions are being sought. Reiterate the ethical considerations.
Discuss the intention of this semi-structured interview, and explain work already completed such as the initial survey and interviews already conducted with Supervisors and Managers.
A conversation with purpose - Interviewee – years with organisation, and brief discussion on the various job functions carried out.

Engagement - General

Def.	This interview relates to the engagement of frontline workers. Tell me what being engaged means to you. How would you define being engaged in your job. Can you give me an example when you really felt engaged in your work?
Q1:	In an engagement survey with all production operators in early 2017, 84% agreed that they were "engaged in their work". What is your opinion on such a high score? Discuss and explain why you think it scores so high.
Q2:	In our annual PER surveys, the average score has been above 76% for the past 6 years. What do you think are the key drivers for such a positive score? What are the key factors influencing such a high score? What is your opinion in terms of whether there is any internal bias associated with this survey?

LEADERSHIP STYLE - The manner and approach of providing direction, implementing plans and motivating people in the working environment

Q3:	The engagement survey indicated that personal feelings of the frontline production operator were not considered by leadership when making decisions that affect you. Why do you think this is the case? Any examples to support?
Q4:	Discuss and evaluate the current style of leadership, and the effect it has on your own levels of engagement. Do current interactions with those in authority influence your decision to engage more in your work? Do you think extra effort is valued?
Q5:	What is your opinion on production supervision, and the need for monitoring shift targets such as productivity, material flow and daily output. In your opinion, how does the supervision of work effect your engagement levels?
Q6:	Discuss the working relationship you have with supervisors and managers and how this affects your levels of engagement when doing your job.
Q7:	To what extent are your opinions taken on board in terms of how the job can be improved? Describe whether you feel a sense of "shared ownership" in achieving the daily targets and plant metrics? (note – not just delivery but safety / quality etc).
Q8:	Tell me about a time where you engaged more in your job because of positive interactions from those in authority? On the other hand, can you recount a time when you disengaged due to some negative interaction?
Q9:	Describe the relevant information that you would like to receive on aspects of the job that could allow you to engage more in issues of importance? Examples such as customer deliveries, quality issues, schedule changes etc.
Q10:	When going the extra mile, and engaging much more in your work – do you think there should be some extra rewards for doing so? What is your opinion on the current rewards and recognitions that are in place.

Q11:	Describe the relationship between the production operators and those in authority? (Manager & Staff) How would you assess how we work together to meet plant metrics

FOLLOWERSHIP - Participation and Collaboration with the Organisation.

Q12:	Should you be provided with clear instructions on what to do when you come to work, or make those decisions yourself based upon your own judgement and experience?
Q13:	What factors, if any prevent you from voluntary participating in extra activities in work? Describe whether the environment welcomes those who like to give that extra level of work engagement in their job?
Q14:	In general, do you like to challenge those in authority on how your job tasks are carried out to improve the way things get done, or just complete the tasks as instructed? Discuss the reaction you get from supervision / co-workers.
Q15:	What impact do your co-workers and union members have on the workplace in terms of engaging more in non-mandatory items? Describe any influencing factors that would prevent you from engaging more in the workplace.
Q16:	How could you be provided with the opportunity to participate more in managing your own workplace and taking on extra job responsibilities? – Ex. Schedule, TPM, Daily Targets. World you like extra responsibility in your job function?
Q17:	What is your opinion on Tier 1 meetings and their relevance as a forum for encouraging greater levels of engagement among the group? Is the Tier 1 environment a good place to discuss and action key issues around your job?
Q18:	Can you describe the factors that either allow or prevent you from participating more in daily work tasks? What impact would extra responsibility have on you?

AUTONOMY - The freedom to choose methods, schedule work and make decisions in performing your job tasks.

Q19:	The results of the frontline engagement survey taken in 2017 indicate that the average operator has very little control over the scheduling and sequencing of their work activities. Why do you think this scores low? Do you think it is necessary in this work environment to restrict worker autonomy?
Q20:	Are there opportunities where production operators could be given far greater freedom to be in control of their job function? Discuss the effects of a highly-controlled production process. Any examples to support your opinion.
Q21:	There are many charts and metrics around the plant. Describe how relevant these are to the job you do, and do you know the important measures that have a direct bearing on your job. Ex. ship dates, 5S scores, visits, audits, schedule changes etc.
Q22:	When at work, can you decide what to do next based upon your own tier meetings and production information. What's the best way to communicate the important data that supports your job. Do you like to meet the supervisor on a 1:1 basis?
Q23:	Tell me about a time where you had complete control on all aspects of the job – How did it affect your engagement levels and how long did it last? On the other hand, tell me about a time when you were just told to do a task without any input.
Q24:	What is your opinion on learning new skills and taking on new job tasks as part of your work. Discuss the relevant positive and negative factors that may influence your decision.
Q25:	Describe areas in your work that you can do but believe are outside of your job function? Are there other significant factors that would prevent you from engaging more in giving extra engagement to the job?

Final Thoughts

Explain the Engagement Cube (Show Diagram). On the scale for each axis, where would you place the organisation in terms of Leadership Style / Followership / Autonomy. Discuss this in terms of the organisation and also where the participant believes they are.	
Leadership Style, Followership, Autonomy –In your opinion which is the most important to achieve higher levels of work engagement? Finally, can you identify one or two things we could collectively do to encourage more participation and engagement.	
Thank you for your time.	Reassurance of anonymity/confidentiality

Appendix 2 – Purposive Sampling Selection Criteria

FORGE X 10

CELL	SHIFT 1	SHIFT 2
160 Press	X	
Etchells Press		X
280 Press 1	X	X
280 Press 2		X
Clean Line	X	X
Heat Treat	X	X
Pre Clip / ASR	X	

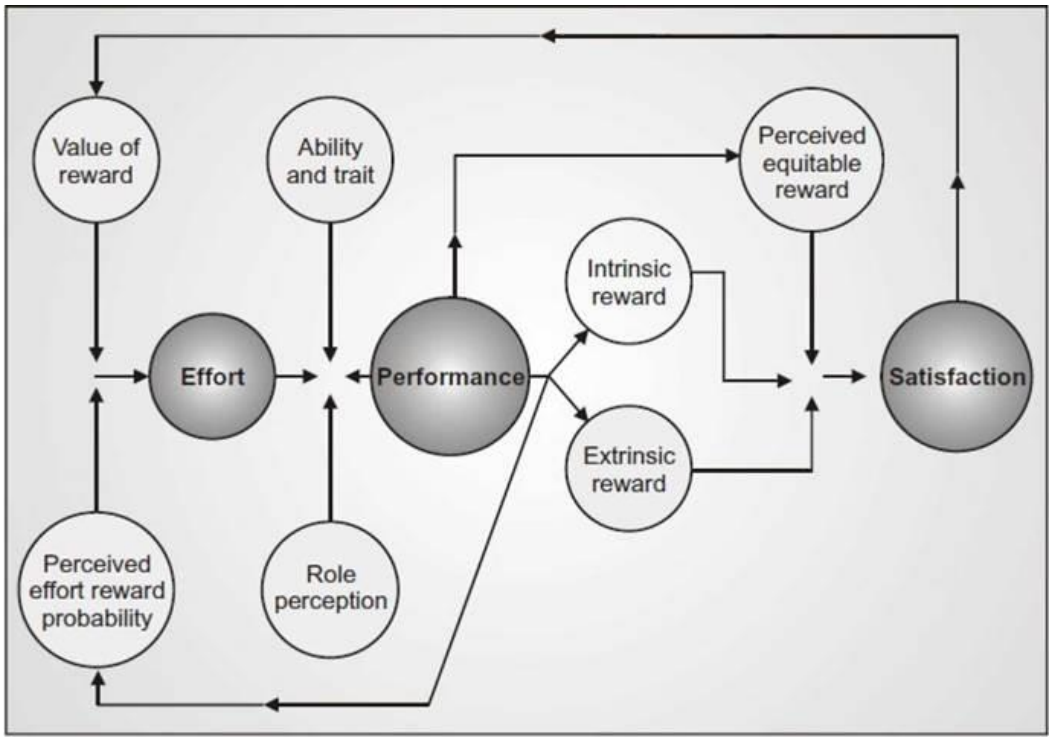
MACHINING X 15

CELL	SHIFT 1	SHIFT 2	Shift 3
Viper 1/2	X	X	
Viper 3/4		X	
3-Axis	X		
5-Axis		X	
Blade Mill	X		
Bostomatic		X	
Classic		X	
Drill / Mill	X		
LX 151 - 1	X	X	X
LX 151 - 2	X	X	X

FINAL PROCESS X 11

CELL	SHIFT 1	SHIFT 2
F.P.I.	X	X
Shot Peen	X	X
Tip Mill		X
Tip Trim	X	
Twist & Bow		X
Root Coat	X	X
Final Inspect	X	X

Appendix 3 – Model of Motivation (Porter and Lawler, 1968)



SECTION 3: DISCUSSION, CONCLUSION & RECOMMENDATIONS

Introduction

This research thesis was divided into three sections. Section one of the thesis provided an introduction to the research, the rationale for the study and the research objectives. Section two comprised of four cumulative papers which were submitted and examined between 2016 and 2018 in partial fulfilment of the DBA requirements. Preface papers have been added between each cumulative paper to show how the overall research developed over time, taking account of continuous feedback from the examiners during the paper presentations.

This research was carried out in Honeywell, which is a US multinational company that produces a variety of commercial and consumer products. Its business units include Aerospace, Automation & Control and Performance Materials & Technology. Honeywell Aerospace Waterford is a medium sized manufacturing facility producing high precision compressor airfoils and fanblades for commercial and military applications. It is a mature organisation with eighty employees manufacturing precision components for over thirty years. The facility operates to a standardised manufacturing process where employee engagement is considered a key driver and behaviour for performance and growth. Employee engagement is taken seriously by the organisation and one of the key behaviours communicated world-wide states that engaged employees will "fully commit to Honeywell and their role, exerting extra effort to contribute to business success, understanding the link between their job and the organisations mission" (Honeywell SharePoint, 2018).

Each of the four cumulative papers addressed an element of the overall research, starting with the conceptual paper 1 entitled: "The impact of a humanistic approach for the engagement of the frontline manufacturing sector". This paper outlined the meaning of engagement as defined by the seminal writers in this field, such as Kahn (1990), Schaufeli *et al*. (2002), Saks and Gruman (2014) and Bakker *et al*. (2008). Kahn's (1990) definition of engagement is encompassing and "suggests something more distinct and unique as it pertains to placing the complete self in a role" (Saks and Gruman, 2014: 159). In Kahn's view, engagement involves a rational choice in which individuals make decisions about the extent to which they will bring their true selves into the performance of a role. This view was extended by Schaufeli *et al.* (2002) stating

that engagement was a positive, fulfilling, work related state of mind characterised by vigour, dedication and absorption. They argued that engagement was not a momentary state but more persistent and included high levels of energy. Furthermore, Bakker *et al.* (2008) linked work engagement to the Job Demands-Resources model (J-DR). The job resources act as a motivational process to increase engagement where the demands of the job act as stressors. The resources help employees cope with the demands, and these employees can then create their own resources to increase engagement levels while at work. The initial conceptual framework in paper one focused on a range of leadership styles (traditional versus humanistic) in manufacturing organisations and explored its impact on work engagement. At the end of this paper, the author had intended to investigate how a more humanistic style of leadership could lead to improvements in work engagement. This seeks a change from a largely economic mindset towards one with more respect for human dignity (Spitzeck, 2011; Mele, 2003). Such an approach can be argued to be a move away from a focus on the technical and scientific aspects of manufacturing in industrial organisations, with more attention now on the person themselves (Aktouf, 1992).

Following feedback from paper one, consideration was given to additional factors that featured on the engagement of the frontline worker from the literature. The first was "followership", as it was deemed important to understand the perspective of work engagement from the frontline operator's viewpoint, and their role in the overall process of production. The second factor was "autonomy", and this was also considered relevant due to the stringent process conditions in this manufacturing organisation. This refers to the freedom the production operator has in his/her work role when completing their daily work tasks. This led to a revised conceptual framework with the objective of understanding how three factors (leadership style, followership and autonomy) impact on work engagement.

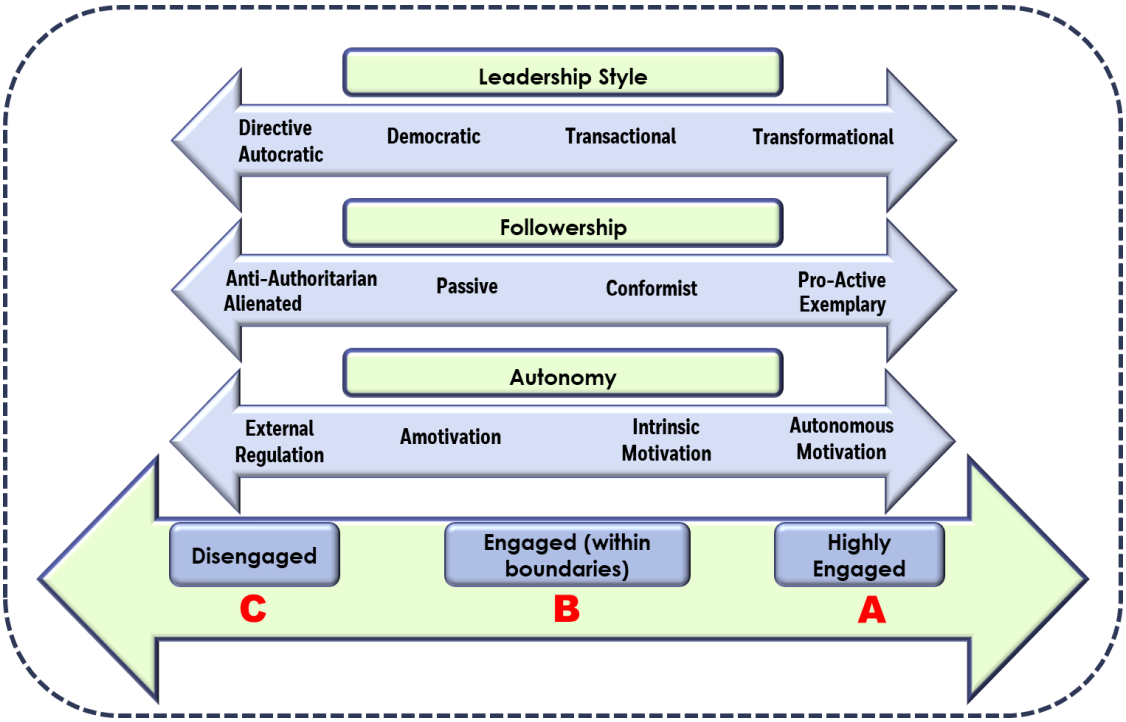
Paper two involved developing an appropriate research methodology, and in this regard, it was noted that work engagement continues to be researched almost exclusively from quantitative survey-based methods (Sambrook *et al*., 2014). Such engagement surveys are easy to administer and can get a high-level engagement profile (Alfes *et al*., 2010; MacLeod and Clarke, 2009); however, it has been questioned how this approach can understand what it means to be engaged, and what facilitates this and why (Sambrook,

2014). Furthermore, Alfes *et al*. (2010: 55) argued that an employee survey is often recommended as the most appropriate way to understand 'the workforce engagement profile', but it will fail to understand how, when and why workers might engage. For this study, the researcher wanted to delve deeper into work engagement to understand the engagement of frontline operators and to see how it is affected by key factors (leadership style, followership and autonomy). A case study approach was adopted to achieve this, as this afforded a greater opportunity to reveal answers to how and why questions and the ability to deal with a full variety of evidence without boundaries (Yin, 2009). As the research was being carried out in the researcher's place of employment, it was believed that an exploratory study had a much better chance of understanding the dynamics involved with a frontline group who know each other and work together every day. Within the case study approach, a mixture of methods was chosen with an initial engagement survey to assess baseline current engagement levels in the organisation. This would then be followed by qualitative interviews with a combination of frontline employees, supervisors and management to get a deeper understanding of the operators' perception of engagement and to assess the impact of key factors on reported work engagement levels.

Paper three presented initial findings which included the engagement survey and the interviews with supervisors and managers of the case study organisation. The survey was conducted with all frontline production operators to assess their willingness to engage in their work tasks and the organisation. The questions asked included areas such as the intrinsic motivation, the autonomy they have in their job and the perception of the organisation in terms of providing personal support. Findings, while positive, paved the way for a more detailed exploration of the key drivers of work engagement. Qualitative semi-structured interviews directly followed this survey with two managers and three supervisors. These five interviews were included to get opinions from the managers and supervisors' perspective on the willingness of frontline staff to engage in their work. Getting the views from this group offered a different insight. It was noticeable that the supervisors and managers did not feel that engagement levels were as high as the survey had indicated. They also highlighted that co-worker group norms had a significant influence on the engagement levels of the frontline operators.

Paper four encompassed the main findings from semi-structured interviews with fifteen frontline staff. The definition and meaning of work engagement was initially explored, and this revealed differences in the perception of engagement by frontline operators from that outlined by Kahn (1990). This was then followed up through understanding the impact leadership style, followership and autonomy had on work engagement. It was evident that the frontline staff comprised of a variation of engagement levels and three distinct groups were identified – those that could be classified as highly engaged (Group A), those who were meeting expectations within boundaries (Group B) and those who were disengaged (Group C). It was suggested that different approaches may be required for each of these groups to alter engagement levels. The final stage of the research looked at the interrelationships between leadership style, followership and autonomy on the work engagement of frontline workers and this can be viewed in the updated conceptual framework (shown in the Introduction Section) below:

Figure 26: Conceptual Framework



Source: Adapted from Bass and Avolio, 1990; Carsten *et al.*, 2010; Kelley, 1992; Deci and Ryan, 2000; Gagne and Deci, 2005; Uhl-Bien *et al.*, 2014; Hardre and Reeve, 2009.

The predominant question coming from this framework was as follows;

How do key factors (Leadership Style, Followership and Autonomy) influence work engagement levels of frontline production operators in a standardised manufacturing operation?

A total of five objectives were explored through a combination of quantitative and qualitative research. This mixed methods research was carried out in the researcher's place of employment, and conducted with frontline production operators, their immediate supervisors and managers of the organisation. The five objectives were as follows:

1. Assess current engagement levels as perceived by the frontline manufacturing workers in relation to intrinsic work motivation, autonomy, and organisational support.
2. Explore the perceived impact the current style of leadership has on the frontline workers motivation to provide greater levels of work engagement.
3. Explore the frontline operators' perceived role as followers in actively partnering and participating in the accomplishment of a shared goal or outcome.
4. Explore the level of autonomy the frontline worker has in a standardised manufacturing environment and how it influences work engagement.
5. Analyse the interrelationships that exist between leadership style, followership and autonomy in achieving increased levels of work engagement.

Discussion and Key Findings

The findings from the research objectives are now compared and contrasted with relevant literature.

Objective 1: Assessment of Current Engagement Levels

When the findings of the engagement survey were compared to theoretical perspectives, considerable differences emerged. The work engagement survey conducted with the frontline operators revealed that thirty-four percent agreed that they were engaged, while fifty percent slightly agreed that they perceived themselves to be engaged. This suggests that a high percentage (84%) of operators perceive themselves to be engaged to some extent and this does contrast with global engagement surveys which indicate

that on average seventy percent of workers are not engaged or actively disengaged (Gallup, 2012). The author believes that this disparity is linked to a misconception on the part of operators on what it means to be engaged, and this variation concurs with Saks and Gruman (2014) who reported confusion and disagreement over the distinctiveness of work engagement. This confusion can be further linked to Bakker *et al*. (2008) who found that global consulting firms such as Mercer and AON Hewitt have combined engagement with such concepts as organisational citizenship behaviour, commitment and satisfaction as an extra role performance measure.

Most of the frontline operators did express high levels of satisfaction with the organisation as a place to work; as one frontline participant stated; *"I think a lot of people are happy in the workforce, I know I'm definitely one of them. I think people are just happy coming to work here, because it's a marvellous company to work for"* (Op. 08). In the view of the researcher, many operators equated high levels of job satisfaction with high levels of engagement which can help explain the relatively high engagement levels found in the survey. The semi-structured interviews support Kahn's (1990) premise that people can use varying degrees of their selves, physically, emotionally, and cognitively, in work role performances, which has implications for both their work and experiences. The emotional engagement could be aligned with those who are generally satisfied and experience pleasant feelings about their work (as shown by Op. 8), and particularly their work tasks. Factory work tends to be physical as there is the handling and movement of product, and Kuok and Taormina (2017) associate physical work with feelings of higher engagement. Finally, cognitively engaged employees are inclined to pay more attention to their work (Kuok and Taormina, 2017), and while many operators referred to the importance of attention to detail when doing this type of work, the researcher felt that the high levels of experience of the operators meant that the detail of performing work tasks was now in peoples' memory but that many were not cognitively engaged with their work. It is therefore argued that operator's perception of the overall organisation and of the physical work performed can have an impact on the positive engagement levels reported in the baseline survey.

The semi structured interviews also revealed that the operators' view of engagement was limited and frequently linked with meeting routine targets as opposed to becoming

more involved in other aspects of the job, such as continuous improvement activities. This concurs with Maslach *et al*. (2001) who argued that perceptions of being engaged is often limited to the work itself and does not mean that the employee wants any extra involvement with the organisation or to be involved in other non-related work activities. This contrasts with more rigorous academic definitions of engagement (Albrecht, 2010); for example, Kahn (1990: 694) described work engagement as the 'harnessing of organisation members selves in their work roles: in engagement people employ and express themselves physically, cognitively, emotionally and mentally during role performances'. The academic definitions of engagement view it as having behavioural, -energetic, emotional and cognitive components (Schaufeli and Bakker, 2010). For Kahn (1990), individuals make a rational choice about the extent to which they will bring their true selves into the performance of a role, and the researchers reflection from the semi-structured interviews is that many of the frontline operators are not bringing their true selves to their work roles – and notwithstanding that there are some operators who he considers to be fully engaged, he believes that the overall engagement level is closer to the 34% who rated themselves to be engaged than to an 84% figure which was included in paper three (as this includes 50% of operators who slightly agreed that they were engaged). Consequently, he feels there is considerable scope to improve the percentage of engagement levels and the remaining parts of the semi-structured interviews assessed the role of three factors in influencing these engagement levels.

Objective 2: Influence of Leadership Style on Work Engagement

The primary research revealed that there were several areas where frontline workers were influenced by their perception of leadership style carried out. These areas are now discussed.

Equitable Treatment

Equitable treatment by supervisors and management was regarded as hugely important for the frontline worker, and several participants commented that when leaders treated them equally, it had a positive effect on engagement levels. As one interviewee stated; *"I don't mind if a manager is dictatorial or easy going once he is the same with everyone" (Op. 02)*. Fairness is a core value in organisations (Konovsky, 2000) and HR professionals often promote fairness in the treatment of employees as a way to

enhance employee well-being, decrease turnover, and encourage job engagement (Shanock and Eisenberger, 2006). The perception of fairness not only related to how they themselves were treated, but how others were treated. For example, some operators felt that not all employees were given the same recognition for tasks undertaken, and this could have a negative impact on future engagement levels.

This perception of fairness extends to how the operator perceives the decision-making procedures employed by the organisation – where fairness equates to procedures that are accurate, consistent and unbiased. In this regard, some workers referred to the need for consistency in relation to such work practices as shift rostering, access to overtime and flexible working hours. When employees perceive the decision-making process to be unbiased, correctable and consistent, they accept that the organisation is following a system that meets the justice criteria (Colquitt *et al*., 2006). Adding to this, Cropanzano and Mitchell (2005) argue that when employees have high perceptions of justice in their organisation, they are more likely to feel obliged in how they perform their roles giving more of themselves through greater levels of work engagement.

In summary, the majority of the interview evidence suggested where workers felt positive about how they and their colleagues were being treated, they would give more of themselves to their role.

LMX Theory

By contrast with the equitable treatment perspective, the LMX view of leadership does not imply that leaders should treat all subordinates equally. This view is espoused by Hooper and Martin (2008) who argue that LMX theory has the potential to violate the principles of equality by showing favouritism and this could create group conflict. This is linked to differential treatment between "in-group" and "out-group" members (Othman *et al*., 2010: 339). This potential for differential treatment was certainly alluded to during the frontline operator interviews where workers felt that those who enjoyed better relationships with supervisors were likely to get favourable treatment. Therefore, although LMX theory may have a positive impact on those who already show high levels of work engagement, it may be less beneficial to those who do not enjoy a quality relationship with their supervisor. The challenge here is getting the balance right, in that by devoting more time to developing strong relationships with

engaged employees, supervisors may leave other operators perceiving that these chosen operators receive preferential treatment relative to themselves.

Reflecting on the operator interviews, the researcher does feel that LMX theory helps explain why some operators are more engaged than others. It proposes that where leaders have a strong relationship with subordinates, the exchange goes beyond just doing the job, and offering greater levels of engagement in the role (Graen and Uhl-Bien, 1995). In such situations, the leaders and followers get to develop a mature partnership, thus gaining many benefits that this relationship brings. The researcher feels that this theory applies very well to some of the frontline operators who appeared to have good relations with their direct supervisor as they were found to be engaged in their work and with the organisation; by contrast, other operators tended to have little interaction with supervisors and were limited to meeting the expectations of the job. In the words of one operator *"there are guys here that will bend over backwards to help their supervisor, while others would have very little interaction with any supervision but know what to do and that's all you're going to get*" (Op 03). In short, the high LMX relationships that had developed had culminated in performance that extends outside the employment contract, where the lower LMX relationship tended to lead to performance which stayed within the bounds of the employment contract where an employee will perform their job but contribute nothing extra; such a conclusion concurs with Brower *et al*. (2000).

From Transactional to Transformational Leadership

The findings from this study were also analysed in relation to literature associated with transactional and transformational leadership styles. Transactional leadership has been associated with exchange related to the offer of rewards in return for compliance and performance (Diaz-Saenz, 2011). This leadership style relies heavily on passive management where a supervisor will intervene only when tasks are not being met, and this kind of manager may use disciplinary threats to bring a group's performance back to standard (Bass and Avolio, 1990). This style was particularly relevant in manufacturing environments during the early twentieth century when there was a huge focus on de-skilling and simplifying work roles. The objective during this era was to use a scientific approach to engineer work roles into short standardised tasks; the focus

was largely on technical aspects of work systems, and neglected the human elements (Zacharatos *et al*., 2007). Some evidence was encountered that this approach is practised with disengaged frontline staff – as many supervisors and managers felt that work tasks would not be completed by these employees without such an approach.

By contrast, transformational leadership is more likely to reflect social values (Bass *et al.*, 2003) and has a closer association with the humanistic approach where the leader engages followers through meaningful, morally uplifting behaviours (Burns, 1978). Those practising this transformational leadership style would be acting to engage their followers by providing meaning, and clearly communicated expectations, and more importantly would be more inclined to consider everyone for their abilities and aspirations (Diaz-Saenz, 2011). It was the opinion of several employees interviewed that the organisation has in recent years moved away from a more directive leadership style to one of participative or even a shared style of leadership. Such an approach was very much in use for the engaged operators (labelled as Group A in Paper Four) where operators knew what was expected of them and a hands-off approach was adopted by supervisors to let them get on with their job. Indeed, such workers could get the work done without the need for any supervision at all – in the words of one operator; *"if a supervisor wasn't on shift and we had work to do, then I think we could organise this ourselves" (Op. 06).* The researcher believes these employees are given far more trust to get on with their own job, and in line with the transformational style, provide guidance and assistance only, without the need for too much direction. According to Bass and Avolio (1990), employees will exert a lot of extra effort on behalf of supervisors who give them freedom to express themselves, but also treats them individually with respect that they will carry out the role to the best of their ability.

Reflecting on the operator and supervisor interviews, the researcher believes that although most supervisor-operator relationships begin with a transactional approach, many can evolve into transformational relationships if there is a strong relationship developed. Transformational leadership approach can have a social element such as exchanges of psychological benefits and favours which differs from material exchange which is closer linked to supervision and not really leadership (Graen and Uhl-Bien, 1995). Transformational approaches applied by managers can achieve long term commitment from subordinates through positive social interactions.

The primary research did suggest that transformational leadership styles are more likely to lead to higher levels of engagement of frontline workers. This reinforces Diaz-Saenz (2011) who reported transformational leadership to be positively related to follower's collective identity, and this led to greater cooperation between employees and supervisors. This transformational leadership style is often described as a shared style where power is shared and as such subordinates are more intrinsically motivated (Srivastava *et al*., 2006). Previous studies have shown that this style of leadership has encouraged followers to improve existing work practices without direct supervision or requiring the stamp of approval from more senior staff (Erkutlu and Chafra, 2013). It can also help meet the needs for self-determination and control (Deci and Ryan, 2000). The findings in respect of the workers in the engaged category (Group A) would suggest that such workers felt valued and were allowed to be involved in decisions that affected their job or influenced work methods. Such an empowered approach was considered a significant driver of engagement. However, there were workers (labelled as groups B and C in paper four) who believed that there could be more consultation when decisions were being made that affected them. Such an approach creates a hierarchical culture which reduce meaning, as it is seen that only upper management can make final decisions (Chin Lee *et al.*, 2017). A less structured or hierarchical system allows employees to make more decisions about their own work and as a result they will be more accountable while at the same time feeing that their extra effort is rewarded (Burke *et al.*, 2006).

Objective 3: Perception of Followership on Work Engagement

One of the major contributions of this study is proposed to be the inclusion of a followership perspective on engagement; this emerged after initial literature searches revealed little emphasis was placed on the role of the subordinate and their interactions with leaders and each other in relation to improving work engagement. For example, Follett (1949) acknowledges that a hierarchical relationship has persisted throughout the twentieth century where leaders were order-givers and followers were order-takers. She was one of the first to propose that leaders can take order from below, and instead of command and obey, it's the relationship that creates a "power-with" culture (Uhl-Bien *et al*., 2014). This relative lack of focus on followers can be linked to an overemphasis on leadership whereas Kelley (2008) suggests that followership

dominates employees in organisations. While one may find it difficult to distinguish followership from leadership style, it can be viewed as a relational phenomenon in which followership is the key element and can be portrayed as beneficial in terms of their commitment to the organisation, its purpose and principles outside themselves (Kelley, 2008).

The conceptual model, shown earlier in this section, presents a followership scale which was developed from the work of Uhl-Bien *et al*. (2014) where employees show traits of followership along a continuum, from anti-authoritarian and passive at one end to more proactive at the other (Bligh, 2011). Those at the proactive end of this scale would closely relate to Van Dyne and LePine's (1998) description of employees who challenge those in authority on better ways to do things and who take on extra responsibilities more associated with non-direct tasks. The frontline interview findings displayed evidence of workers at all points of this scale; there were on one hand several frontline production operators who believed that they knew their own job very well and were prepared to complete all necessary tasks in order to meet the organisational targets. These operators felt that the supervisor's role was to guide production in terms of schedules, but they had an interest in much more than just producing parts. At the other end of the spectrum, there were operators who awaited instructions at task level, and it was indicated by the supervisors that the work would not get done without their intervention.

The interviews also revealed that factors related to the group environment in which they operate can influence the willingness of operators to go above and beyond their immediate job role. Such factors are discussed in the next section.

The Influence of Group Norms

It emerged during the semi-structured interviews with both management and operators that group norms had a significant influence on engagement – and such norms refer to informal rules which regulated group member's behaviours. These rules were linked to the unionised environment with many performance agreements being negotiated in recent years between management and union representatives. Examples were shared where operators felt that peer pressure applied from their co-workers influenced their decision to engage in supporting non-core production activities and felt uncomfortable

taking on additional work that may be perceived as unrelated to their basic function. As one operator suggested; "*there is certain things that you might have to check with the union reps just to run it by them, as I wouldn't feel comfortable doing it otherwise".* All accepted that relationships with unions have largely been positive at this plant for many years, but it is still accepted that this unionised environment does influence the culture within which workers operate – with implications for work engagement of operators.

The discussions with supervisors and operators revealed both positive and negative aspects associated with group norms. On the positive side, it was noted that while there is an economic business ethos at the plant (work must be done to get paid), there is also a humanist ethos, in that this group may be classified as a type of community (Mele, 2012). Seeing the business as a community offers a different perspective, one that is not so common in the business literature but does point to a more cooperative arrangement as described as important by Follett and Barnard (Mele, 2012). This can have a close association with work identification (often mistaken for engagement) where there is a focus on loyalty to the company and one another, a job for life so to speak. Many spoke highly of the company, and this may be associated with the human relationships that have being forged over time. Business efficiency is not down to the mechanical operations, but team spirit and the morale of those employees who work together cooperating for the good of all (Solomon, 1992). Operations on the factory floor of this manufacturing plant are also highly driven by targets which are agreed between management and union representatives. Such agreements do have positive implications for engagement as the competitive nature of meeting set targets does incentivise staff to hit desired performance levels.

However, there are downsides to such agreements, in that if workers are given a target to produce a set quantity per day, there is little incentive to produce more than this defined target and indeed, the interviews alluded to peer pressure on productivity with terms such as 'rate buster' being mentioned (Lloyd and Mertens, 2018) – this means that co-workers do not look favourably on workers who breach expected target levels. Such practices can place a ceiling on work engagement – and for many who have been classed as Group B in this study (engaged-within boundaries), part of the reason they don't exceed expectations is because of negative peer pressure associated with those

who surpass targets. This group see themselves as part of the community and do not want to risk unfavourable comments by co-workers by deviating from the mandatory elements of the job (Mele, 2012). For those in Group C (disengaged), group norms are also a strong influence on performance, and such workers would fear the social consequences of being perceived to be a 'rate buster' – they would fear isolation from their current co-workers if they have breached group norms by taking on additional tasks (Aktouf, 1992).

The Shared Role of Followers

While the leadership literature considers how followers perceive leadership outcomes, less is known about how followers see themselves and their own roles in the leadership process (Uhl-Bien and Pillai, 2007). Carsten *et al*. (2010) conducted exploratory qualitative research on followers and how they view their own role in organisations, especially how they interact with people above them. Some report that they refrain from getting involved and prefer to remain silent or passively supporting the leader's way of doing things, while others saw themselves as participants, or "co-producers" becoming much more involved. This can be linked to the followership scale in the conceptual model which proposes that there are workers who await and take instruction on what to do (passive), and in contrast, there are those who felt in complete control of their own job and were prepared to challenge leaders in a constructive manner if need be (pro-active). The term shared role of followership (which is linked to followers sharing the leadership role in organisations) is still a relatively new concept but has the potential to increase the level of engagement in the organisation. For the Group A workers in this study who were classified as being highly engaged, it was observed that these workers were comfortable in challenging leadership decisions in a constructive manner. These were at the proactive end of the followership scale and this led to them having a more active role in the leadership process (Shamir, 2007).

On the other hand, there were operators in Group B who stated that they would be uncomfortable challenging leaders, and this may be related to the relationship they have with their supervisor. These operators can be viewed as conformists on the followership scale and Tepper *et al*. (2006), argued that it may be considered too risky for an employee to hold strong co-production beliefs if they feel that their relationship with

their immediate supervisor is low. Such workers are more comfortable accepting instructions from their leaders but are unlikely to have high engagement levels. At the lower end of the scale, Group C workers (alienated) are often seen as destructive, from ignoring their manager or withdrawing support, and in the past, this was considered as ineffective leadership as opposed to poor followership behaviours (Uhl-Bien *et al*., 2014).

In summary, this objective allowed a focus on how followers see themselves and their own roles in the organisation and this complimented the earlier discussion on leadership approaches. At the end of the interviews, the researcher is of the view that it is challenging for organisations to get the balance right in terms of leaders and followers contributing to its overall success.

Objective 4: Influence of Autonomy on Engagement Levels

A third factor which was explored in relation to work engagement was job autonomy. Traditionally, according to Hackman and Oldham (1980) job autonomy is the degree to which the job provides freedom, independence and discretion to individuals to schedule their work and determine procedures used to carry it out. This factor was specifically significant, as literature suggests that employees become empowered to take on more responsibility when they have the freedom to do so (Deci and Ryan, 2000). Choice gives the employee a sense of personal control and in doing so results in improved morale, better performance and greater organisational commitment (Chua and Iyengar, 2006). There is also the argument that job autonomy makes one's work more meaningful (one of Kahn's (1990) three factors of work engagement) which enables individuals to identify with their work and contribute to organisational performance (Laschinger *et al*., 2000). This in turn conveys more trust in the worker, and this responsibility can lead to greater satisfaction and increased levels of work engagement (Deci and Ryan, 2000).

The results of the initial survey found autonomy levels to be low which is unsurprising in the controlled production environment of the case study organisation; for example, a large majority of production operators stated that they had little control over the scheduling, sequencing and procedures used during their working day. The discussion of 'Objective One', earlier in this chapter suggests that engagement levels are lower

than they appeared initially (the percentage that are engaged is now at 34% when those that slightly agreed that they were engaged are excluded). With this in mind, one could argue that the relatively low engagement levels of frontline operators could be partly attributed to the perceived low levels of autonomy; however, it was unclear from the survey as to why some workers could report high levels of engagement in such a controlled manufacturing environment. This was examined further during the semi-structured interviews under two subheadings which are now discussed.

Process Standardisation

At the outset of this study, the researcher believed that the stringent controls of the manufacturing process would be a potential barrier to employee autonomy as it gives frontline staff very little scope to schedule, sequence or adjust the operation. The initial engagement survey also scored autonomy low with only nine percent agreeing that they had an input into how production was planned. However, during the interviews, it emerged that the process standardisation had little or no effect on the frontline workers motivation to engage. Of all those interviewed, none of them felt that the procedural controls affected their ability to engage in their job or with the organisation. As one of the participants stated *"I don't think the standardised process is a problem, that's just a fact of life. I wouldn't see it as a negative and there is a planned structure there for it" (Op. 07)*. The interesting aspect to this quotation was that this high level of control was welcomed and observed as a type of safety net where by following clear and standardised procedures, product quality and consistency were also maintained. It appeared that this methodology had become ingrained in the culture. Manufacturing specifications were routinely quoted, and frontline operators would not deviate from the procedures which ensured the final product conformed to specifications, and despite this controlled environment, many operators still felt they had some freedom into how they planned their daily tasks.

The concept of meaningful work can also be considered to impact on engagement (Kahn, 1990). The interview findings suggested that the production operators perceived a high level of job identity, and none of the participants felt that the work was boring or monotonous. Production operators get used to routine, and although repetitive work has been associated with less autonomy, there are circumstances where the worker can

create the resources to limit the effect of job monotony. This concurs with the literature on job monotony, as Hobfoll (2001) stated that people build resources that protect them from these stressors of the job. The frontline operator interviews revealed that the majority of workers felt that the work has been designed to help cope with the job demands and in the case of engaged employees, they possessed an ability to build resources that can have a buffering effect on the demands of the job.

Job Enrichment and Comfort Levels

The earlier discussion around LMX theory also revealed that those who are willing to put in additional effort tend to get favourable treatment by supervisors; this can manifest itself in getting chosen for additional tasks by supervisors when new products and processes are being introduced. Such engaged operators put themselves forward when new processes are introduced into production and are usually the more engaged workers; they can be considered as "the willing horses". For these workers, more involvement and variety in their work tasks is sought and they are not satisfied just doing the one task repeatedly. Expanding the range of work tasks can be considered as a form of job enrichment, a concept concerned with designing jobs that require greater variety and a higher level of knowledge that promotes personal growth and meaning (Herzberg, 1976). In the author's view, the Group A workers always sought out variety in their job tasks and were likely to be offered diversity in their work roles by supervisors as a result.

However, those who are currently satisfied with their current work content see little benefit in embracing new tasks; this could be linked to low confidence levels as they have a fear of change, a theme that came up many times. Such participants (Group B workers) prefer to remain in their "own" job, and cited factors as being too old to start something new or the fear of moving away from a job they like, to doing something new that is not compatible with their current skill set. For example, one operator indicated that he was in the current role over thirty years and did not want to start something new, while another questioned why he would change from a role he enjoyed doing to an area where he was unfamiliar. Such workers will avoid diversity in work tasks and will settle for the methods they know best, recognising that they can do the job better than anyone else (Reif and Luthans, 1972). The supervisor interviews did

suggest that the engagement levels of Group B workers were related to their maturity and experience - as one supervisor noted; "*They are [operators] not challenged in their work and satisfied enough to plod along knowing that targets are easily achievable"* (PS 01). However, several production operators had a different opinion, as one pointed out that while the work may not appear to be challenging, it took many years to master, specifying that he was doing this job thirty years, had a fixed routine, and "*was happy enough and didn't want to try anything new*". It is possible that this supposed comfort zone for the Group B workers may be perceived as leading to lower levels of engagement, not because work doesn't get done, but the methodological nature of the production process means that any extra effort is not visible to supervisors. These operators may not be looking for promotion, and although there was no evidence to suggest they lacked ambition, they were not seeking extra responsibility at this stage of their careers and are comfortable in the knowledge that their current work role satisfies their present needs. In short, the researcher feels that those who were described as being in Group B had become comfortable in a role that suits their skill set, and a fear of change made them unlikely to seek new challenges from this familiarity that they were comfortable with.

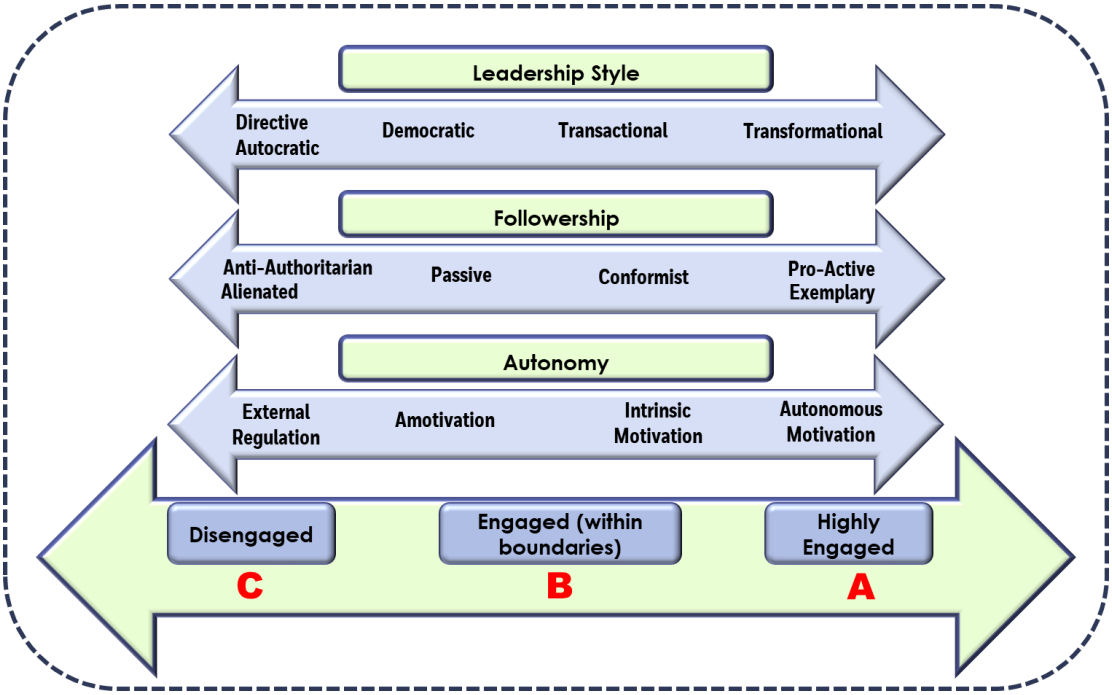
Objective 5: Interrelationships Between all Three Engagement Factors

The previous sections examined the impact of the three factors on work engagement independently and in this final section of the primary research, the interrelationships between all three factors were explored. A starting point for this analysis was the final section in the interview guide where participants rated the organisation, and themselves on their motivations for engagement based upon leadership style, followership and autonomy. This helped to see interconnections between the three factors; for example, one participant noted;

> "Leadership style and followership go hand in hand, as you have to be allowed to make decisions yourself, many here wait to be told what to do by a supervisor and that's because it has always been done this way"

When aggregating the expressed views of leadership style, followership and autonomy along with the stated levels of engagement, the researcher felt that three distinct categories emerged within the operators; these were classified into groups A, B and C and shown below in Figure 27.

Figure 27: Engagement Continuum



Source: Adapted from Bass and Avolio, 1990; Carsten *et al.*, 2010; Kelley, 1992; Deci and Ryan, 2000; Gagne and Deci, 2005; Uhl-Bien *et al*., 2014; Hardre and Reeve, 2009.

The rightmost part of this diagram shows the frontline operators who rated themselves high on each of the three scales and these were categorised as Group A (Engaged). A small number of operators did fall into this category and for such workers, there was a strong bond between them and their supervisor; in fact, the relationship was one where the proactive operators believed that they were in control of their job, and the supervisors were largely adopting a supportive role. In fact, it appeared that job meaningfulness was rated highly by these workers, showing evidence that the characteristics of the job matched their own interests. In the only empirical study to test Kahn's (1990) theory on the three psychological factors May *et al*. (2004) found that job enrichment and role fit were positively related to meaningfulness especially when supported by positive supervisor relations. This would correspond with a shared leadership approach where empowering work climates blur the lines between leaders and followers and relationships are more participative in nature (Collinson, 2006). Notwithstanding the controlled manufacturing environment, such operators perceive that they have freedom and opportunities for getting involved, having the resources to be available (Kahn, 1990) in the decision making which led to a more varied and

enjoyable work experience (Pearce and Manz, 2005). This group are also not so concerned by negative reactions from co-workers, in relation to the psychological safety element proposed by Kahn (1990). Kahn (1992:11) suggested that this can come down to the strength of the individual in that some have the capability to "maintain the boundaries between self and others such that abandonment and engulfment are less charged issues".

The participants who were deemed to be in Group B (Engaged-within boundaries) did not show the same vigour and enthusiasm as that of the highly-engaged group. While many in this group may have rated themselves to be engaged in the initial survey, the semi-structured interviews that this group equated meeting one's target for the day or completed tasks they were assigned by their supervisor as meeting the definition of engagement. For such workers, they may be fulfilling the mandatory function of their job, and because of their mature age, the potential career advancement opportunities from putting in extra engagement was not of significant importance. This can be linked to expectancy theory which assumes that expectations about the future influence present behaviour (Frenkel and Bednall, 2016). Vroom (1964) purported that an individual's intention to give extra effort to their job depended upon three elements, the expectancy that the extra effort will achieve a certain performance, that this performance will lead to the intended outcome and this outcome is desirable and worthwhile. It is on this basis that each worker determines the level of extra effort given to their role. For the Group B workers, there was intrinsic satisfaction with the nature of the work tasks but there was a poor perception of the extrinsic rewards available for going above and beyond the scope of the job. Production operators gave examples of these behaviours, where one participant claimed; "*why should he become more engaged when there was no perceived benefit to do so*." This also has close ties to the complex relationship between effort and motivation, and Porter and Lawler (1968) argued that the amount of effort applied is based on the value of reward and reward effort probability.

In terms of the three factors influencing work engagement, the researcher believes that the strongest factor driving their location in Group B was the passive / conforming followership role that they adopted – and this was heavily influenced by their strict adherence to group norms which was outlined in union agreements. In relation to group norms, this cohort of workers are concerned about the safety element of Kahn's (1990)

theory, who suggested that individuals who stay within the boundaries of appropriate behaviours will feel safer at work, and this would resemble the behaviour of this group. They will tend to check first if it's 'safe' to complete a task that may not be associated with their primary job. This has a close association to Barker's (1993) theory on normative rules that develop in groups, a term he called 'concertive control' where peer pressure can force compliance among others. However, those categorised in group B did appear to like their 'own' job role, and many stated that they preferred to remain doing their own job, not wanting to risk a change. It could be argued that they are psychologically available (Kahn, 1990) in that they find their roles inviting and expansive enough to enable them to be psychological present that fits with their own identity (May *et al*, 2004).

Uhl-Bien and Pillai, (2007) argued that it depends on how the employee perceives their role, and while some like to speak up and see themselves as a partnering role, others tend to see their role in a more traditional subordinate sense, taking on less responsibility and conforming to instructions. It could be argued that leaders play a negative role in creating passive followers, as several studies have found that simply assigning someone a role to be "followed" can give the notion that the leader has more knowledge of the process, and the worker should just be deferent and obedient (Gerber, 1988; Morand, 1996). Many examples of this behaviour were referenced during the interviews where both managers and supervisors were said to be over prescriptive on production tasks, and this led to withdrawal behaviours from some operators. They will also await instruction, and there was a combination that this was the standard approach and expected, but also a sense that there is too much intervention with these employees from supervision. A less directive or transactional approach here could be more beneficial to allow more engagement in associated activities. There are probably some that have the capacity to increase engagement with a more transformational leadership style. Alternatively, some may feel uneasy to step outside their comfort zone and prefer to remain just completing the mandatory tasks of the job.

Finally, for those identified in Group C (Disengaged), a powerful theme coming through the semi-structured interviews was an acute sense of self-awareness. For these operators, it was not a good thing to engage with the organisation and they tended to check if it is "safe" to carry our certain tasks that could be deemed non-core job related,

but beneficial to the company. In the words of one operator "*I certainly would be slagged-off [by co-workers] if I was seen to complete other jobs not associated with my own*". If employees are overly concerned about what their co-workers may think or feel about them, they may struggle to be psychologically available to engage in their tasks (Rothmann and Welsh, 2013). According to Olivier and Rothmann (2007), such a level of self-consciousness means that the employee is aware of being observed in a critical and negative manner. Oliver and Rothmann (2007) noted that lower levels of self-consciousness were linked to lower psychological availability. This finding is also supported by May *et al*. (2004) which implied that if someone is less self-conscious they will be more available to engage in their work tasks.

Those in group C are impacted by their ability to be available and safe to engage more in the job – as per Kahn (1990), availability refers to the belief that the employee has the emotional and psychological resources required to invest in the performance of the role (Saks and Gruman, 2014), while safety can be defined as the experience of being able to act in a way that is natural, and be able to use and employ all skills and knowledge in a role without having to fear ridicule or negative consequences (Kahn, 1990). The fear of a negative reaction by co-workers was certainly an impediment to engagement for this group and it will be important to understand how to address these personal resources if engagement levels are to be improved in the future.

While there was evidence that the disengaged workers had a negative view of the organisation, it did not follow through that they also had poor relationships with managers or supervisors. For such workers, a transactional leadership style was typically in place. Legacy issues had played a part in the low engagement levels; there was evidence that industrial relations and union pressure played a part, and such metrics as standard hours, parts per hour and labour efficiencies which are the subject of union agreements can be perceived as threatening current work rates.

In summary, while the author has created three broad categories of engagement based upon behaviours related to leadership style, followership and autonomy, the lines of delineation are not clear, and a certain amount of crossover is inherent in the process. There are however recurring themes coming through in the data that suggests that certain factors influence the different groups. Those in Group A are in a highly-engaged

state and the challenge here is to seek to continually engage such staff without being seen to offer preferential treatment to such workers. They will put themselves forward to take on extra responsibilities and show signs of co-sharing leadership in how they carry out their work tasks. They appear to have lower levels of self-awareness and seek to become involved in the decision-making process. The three psychological conditions of meaningfulness, safety and availability can explain moments of engagement or disengagement, but there are also the individual differences that shape employees' disposition and willingness to become engaged (Kahn, 1990). According to Kahn (1990) a direction for future research was to connect personal engagement to existing concepts such as the employee's perception of those around them, for example why conditions would make them feel unsafe to perform a role they identify with. Group norms and co-worker relationships were a significant factor throughout the research and individuals who are more secure about their attachment with others are more able to be psychologically present to engage in their work (Kahn, 1992).

Implications of the Findings

The implications of the primary research findings are now discussed for a range of stakeholders involved in this study with a view to maintaining and ideally improve engagement levels in the organisation.

Implications for Leadership

The semi-structured interviews with management and operators assessed the influence of leadership style on work engagement. In this regard, it is noted that leadership is more concerned with how employees think and feel and the linkages to their job tasks. This contrasts with management which is getting things done by activities of planning, organising and controlling, without worrying what goes on inside people's heads (Nicholls, 1987). In relation to the frontline workers identified as engaged, it appears from the findings that they satisfy the three psychological conditions of meaningfulness, safety and availability as defined by Kahn (1990). It has been argued that higher levels of work engagement will occur when employees' psychological needs are satisfied (Harter *et al*., 2002). The ability for leadership to coach and mentor those frontline operators who display high levels of engagement help them take on greater responsibility and are provided with the freedom to make increasingly larger

contributions to organisational performance (Zhu *et al*., 2009). Therefore, it is important for this group to be allowed express themselves and be provided with continued support through more meaningful work.

It is the operators in group B (engaged within boundaries) that offer the greatest potential to increase their level of engagement. Leadership should attempt to change their levels of engagement through meaningful interactions. It cannot be taken for granted that transformational leadership styles are understood throughout the organisation. Organisations need to pay more attention to followership training, as it does not automatically come naturally, and supervisors need to be shown how to enhance work engagement through meaningful interventions (Zhu *et al.,* 2009). This may require formal training, and external support could be required to train staff on such approaches. Opportunities also exist in showing these operators the benefits in expanding their role to include tasks that would not be considered as part of the work in the past. The strength of group norms should not be underestimated, and it is difficult for an individual to step out of these norms. This is especially true where frontline workers have set targets and work together each day in a unionised production environment. There are certain expectations that tend to be ingrained in this culture, and often not apparent for managers to see. The peer pressure exerted on co-workers can sometimes go under the radar. Management need to understand factors that influence these behaviors and work with the operators to address in a non-threatening way.

At the other end of the spectrum, group C will require "high touch" interventions, as the work will not get done without this focus. Such an approach is not viewed as an autocratic style, but supportive in terms of allowing some scope for the operator to apply themselves more. The findings suggested that self-awareness and offering higher levels of engagement were not deemed to be favourable for these frontline employees. According to Zhu *et al*. (2009) this can often be related to the perception of leaders and what they call the "golem effect". In other words, if the leaders of the organisation view that these employees offer very little in terms of their contributions, then these same workers will rate themselves low and as a result their work engagement will be significantly lower. Thus, they may have a reserve of untapped potential of which leaders may be unaware. The ability to assume higher expectation could lead to a more

positive outcome as a starting point. When these disengaged workers show signs of extra effort, leaders should ensure that it is recognised, and not overlooked, as small incremental changes could lead to such workers moving across to Group B.

The need to belong is a fundamental human need (Baumeister and Leary, 1995), and previous studies have alluded to the fact that if this need to belong is threatened, the employee will be motivated to earn their way back into favour. Managers need to understand the strength of these relationships and be careful in how to stimulate positive aspects of work through group interactions, selling the idea of what it means for the organisation and each other.

Implications for Frontline Supervisors

The implications for supervisors will be aligned with the leadership function in terms of the expected approach but will be slightly different than that of managers as they have a direct and closer relationship with the frontline production operator. The managers provide policy and direction, but it is the supervisors who operationalise procedures in production through individual and group interactions. The ability to supervise frontline production operators who have different opinions on both the meaning of work engagement and their own perception on their role is a substantial challenge.

The transformational leadership style challenges supervisors to move away from more controlling methods to get work done and re-examine the traditional styles and beliefs that supervisors have all the answers. The findings did show that in many cases frontline workers awaited instruction because that was how it occurred in the past and therefore expected in the future. Deci and Ryan (2000) classified this as external or controlled motivation and indicated that it results in workers going through the motions but lacking motivation to engage in activities due to apathy. In counteracting a controlling behaviour, Hardre and Reeve (2009) outlined a supervisory style that nurtured employees to engage in a positive way. This included the use of non-controlling language that is rigid and pressurising. They also stipulated that in many cases frontline employees are given work to do without being provided with the rationale. Many manufacturing workplace procedures are not inherently interesting

things to do, so providing rationales is especially important when employees face activities that are not so appealing.

Those in Group B who, while are satisfied with their own job, may take on more responsibility if the environment is right to do so. These may feel that they are constrained by union regulation and are nervous of putting themselves forward. Supervisors need to challenge this through transformational styles of leadership, including allowing more decision making within their own work areas. For example, there were many operators who wanted to be involved in further decision making, and sometimes felt constrained by the belief that they needed formal approval to do so. These small steps of progression can often be underestimated by supervision, and they may believe that the frontline production worker has the autonomy and self-belief to make decisions themselves. Unfortunately, these operators seek supervisory approval because that's what they have done in the past and may believe they are supposed to do. It is this control that often gets hidden in the bureaucracy of manufacturing through legacy rules and hierarchy (Barker, 1993).

Implications for Frontline Workers

There are positive aspects to becoming more engaged such as the additional rewards and recognition for additional effort and the increasing ability to work independently in a shared leadership role with supervisors. Furthermore, there is potentially more job enrichment available by becoming more engaged and this can lead to more satisfied workers. On the other hand, operators seeking to improve engagement will be conscious of negative aspects of group norms ("breaking rank" and being a "company man") which would be the consequence of more application of their role. The relationship between the supervisor and frontline operator develop primarily because of workplace interactions (Graen and Uhl-Bien, 1995). When these relationships are deemed to be low it results in higher levels of supervisory control and directives and less desired assignments (Liden and Graen, 1980). It is important for frontline operators to also be aware that employees who experience high quality relationships with their supervisors tend to have greater autonomy, more access to their supervisor and receive more information than those employees who have lower LMX relationships. Additionally, they are assigned more challenging tasks (Graen and Uhl-Bien, 1995).

Thus, frontline workers who maintain a high quality LMX relationship with their supervisors can be expected to engage in organisational citizenship behaviour such as working overtime and offering extra help to co-workers and managers (Jha and Jha, 2013).

Research Contribution

Although much literature has been written about work engagement over the past twenty years, this paper is distinctive in its approach which combines the impact of three factors (leadership style, followership and autonomy) on the engagement of manufacturing frontline workers. It is proposed that this thesis thus makes important theoretical and practice-based contributions which are discussed further below.

Contribution to Theory

This study makes three theoretical contributions – the first relates to the role of the frontline worker themselves, the second relates to the creation of the conceptual model of work engagement and the third contribution relates to the methodological approach taken.

Consider Role of Followership on Work Engagement

Followership is often treated in a limited perspective as an 'undifferentiated mass of collective' (Collinson, 2006: 179). Despite this, interest has grown over the past 10 years on the attributes of positive followership, and how organisations can benefit from collaboration between management and frontline staff. Followership has very close similarities to categories of work engagement. For example, there are parallels between a disengaged worker and a follower that is perceived as unwilling to participate or collaborate with management. Connections can also be made with engaged workers and followers that like to speak up and have their ideas acted upon in cooperation with management. Zhu *et al*. (2009) proposed that followers who enter a leadership arrangement with higher levels of self-efficacy, resilience and optimism might be expected to perform more effectively than those who work for leaders who diminish their ability to take on more responsibility and rise to greater challenges. It is the style of followership that contributes to the engagement of frontline workers, where certain mixes of followership can create positive situations for leaders (Kelley, 2008). This

study adopts a followership scale adapted from Kelley (2008) and this is found to have a considerable impact on which of the three engagement groups that operators get assigned to; for example, a major reason why workers get assigned to Group B (engaged within boundaries) is their adherence (passive/conformist) to established group norms in the organisation. Therefore, in the context of work engagement, the contribution is that efforts to improve work engagement levels need to firstly consider the extent of adherence to established group norms and then examine how these norms need to be adjusted in tandem before engagement levels can be improved.

Extension of Engagement Theory to Frontline Workers

While literature exists on leadership style, followership and autonomy and their individual effect on work engagement (key authors include Kahn, Maslach *et al*., Scheufeli *et al*., and Saks), little prior literature was found to interlink these three areas to work engagement. This study, while addressing these three factors of work engagement and their individual influence on frontline workers also assess interrelationships between these three factors. It led to findings that more engaging transformational leadership styles are more appropriate where followers adopt a proactive approach whereas by contrast a more directive transactional approach may be needed for those who have an anti-authoritarian approach to followership. These interrelationships can make those in leadership positions more aware of the impact they have on how they shape their employees to perform. From a theoretical viewpoint, it will contribute to a more holistic understanding of engagement levels by recognising the interrelationships between three key drivers of work engagement.

However, during the discussion on these interrelationships, variations were shown between groups A, B and C in terms of their willingness to engage based upon Kahn's (1990) theory of meaningfulness, safety and availability. Kahn (1992) in his reflection upon these psychological factors argued that organisations may create the conditions for engagement, but their members may be unable or unwilling to risk such experiences. Therefore, as frontline employees perform within their work systems, they will learn about when and where they can be fully present with varying degrees of risk, and organisations can act in a way to support these differences. This study also suggests that different approaches will be needed for workers at different points on the

engagement continuum and in this way, the model can facilitate tailored approaches being taken to address engagement levels for different worker groups.

Mixture of Methods to Assess Work Engagement

Comparing the survey results with the operator interviews in this study suggests that frontline operators may have a positivity bias when answering engagement questions in a survey – the initial results suggested high levels of engagement which can be partly attributed to a feeling that one is engaged if one is meeting all the standard conditions asked of by management, and this was a concern when workers know that engagement levels are being collected by management. While engagement surveys are popular and can be easy to administer, the researcher believes that this mixed model approach adopted in this study allowed for survey statements to be corroborated to address validity concerns and provide a methodological contribution to the study. Conducting follow up interviews will be more time consuming, but the evidence from this study is that it will lead to a more complete picture of engagement levels being generated. This finding corroborates Kim *at al*. (2013)'s finding that combining various types of data when researching work engagement is likely to improve and supplement some of the missing pieces that impact on the employee's performance. In a similar vein, Sambrook *et al.* (2014) stated that responses to one-off self-report questionnaire will not augment the complete understanding of who and what facilitates engagement.

For those continuing to assess engagement through survey approaches, consideration should be given to the role that cultural influences (group norms) can exert on engagement levels as almost all workers want to do as much as their peers but only a minority are comfortable doing more work than their peers. To capture this strong potential influence on work engagement, future surveys could consider a sentence such as 'The engagement levels of my co-workers influences my own work engagement'. Engagement surveys do ask questions such as "at work, do I have the opportunity to do my best?", and "are my co-workers committed to doing quality work?" (Buckingham and Coffman, 1999); however, a question more related to the affiliation between co-workers could augment peer to peer relationships and would also have a linkage to the 'safety' element as per Kahn's (1990) three psychological engagement factors.

Contribution to Practice

This DBA also makes a number of contributions to practice as follows:

Recognise the Individual Needs of Followers

The research findings evaluated the engagement level of frontline workers and assessed the influence of leadership style, followership and perceived levels of autonomy on such engagement levels. Within the followership factor, a scale adapted from Kelley (2008) proposes that those who are anti-authoritarian are likely to be disengaged compared to those who are proactive and more likely to be engaged. This would suggest that organisations need to understand and pay attention to where their operators lie on the followership scale and tailor the leadership approach accordingly. Bass and Avolio (1990) called this the individualised component of transformational leadership; this involves gaining an awareness of what inner resources employees possess and instead of extrinsic measures such as incentives or directives, find ways to make tasks inherently more interesting to the person based upon their own on-the-job interests and sense of value (Hardre and Reeve, 2009). For example, as Zhu *et al*. (2009) pointed out some employees can be considered to be independent thinkers, and therefore leaders should delegate more responsibility, so they become more engaged in their work. While others are more inclined to seek continuous improvement ideas, and therefore should be afforded the opportunity to get involved in problem solving initiatives.

Transformational Leadership

This chapter has proposed that frontline operators are more likely to be engaged when exposed to a transformational leadership style, but Bass and Avolio (1990), noted that this style of leadership tends to occur at the top rather than the bottom of the organisation. Transformational leadership can and should be learned, and according to Bass an Avolio (1990), there is empirical evidence that shows that where leaders were proficient in transformational practices, their immediate subordinates improved in productivity. It follows from this that consideration should be given to the coaching of supervisors on how to implement such an approach; this supports Roebuck (2011) who suggested that leadership failings often stem from poor understanding of leadership theory, and that organisations would benefit from guidance on transformational leadership styles. Intervention research shows that supervisors can learn how to

become more autonomy-supportive in their interactions with their immediate work teams through becoming less-controlling and having the ability to take on other persons perspectives (Reeve *et al.*, 2004).

Cultural influences can exert a disproportionate effect on engagement levels

For this research study, the impact of co-worker group norms was found to exert a significant influence on engagement levels. Much of these group norms is linked to the strong unionised presence of the operator group and it was found that agreements negotiated with unions had a strong influence on engagement. This effect can be positive as operators are expected to conform to expectations in such agreements, and this desire to meet target levels of performance can be linked to the social context in that workers are conscious of their perception amongst co-workers; this reinforces Mayo (1933) who referred to the inner compulsion to think and act in a way that is socially acceptable. On the other hand, the cultural aspects of negotiated union agreements for operators can discourage operators from achieving higher levels of productivity because they fear that this will create negative perceptions of themselves amongst their co-workers – a 'rate buster' or someone whose conduct does not fit well with the group (Lloyd and Mertens, 2018). For organisations looking to implement engagement initiatives, it is suggested that they become aware of this social context in which workers operate and realise the implications that this may have for work engagement – in advance of any efforts to alter engagement levels.

Avenues for Future Research

While this research study has highlighted many aspects of work engagement of frontline staff, it has also opened possibilities for future research in this field. In this regard, it is worth restating that this study involved a single site case study of a multinational organisation which employs eighty staff. Such an approach has advantages; Yin (2009) states that a single case study is suitable when the researcher wants to study for example a person or a group of people or when the researcher can question old theoretical relationships and explore new ones. To see the applicability of the single case study findings in a wider context, consideration could be given to:

- Replicating this study in other Honeywell plants: Replicating the study across other Honeywell plants to see if the findings from the Waterford plant apply equally to workers in other divisions. Multiple cases would create a more robust theory because they are more deeply grounded in varied empirical evidence (Eisenhardt and Graebner, 2007). Such follow up studies could also employ a mixture of an initial engagement survey to get perceptions of engagement levels and semi-structured interviews to assess the drivers of engagement levels.
- Explore the effect of age on engagement: For this study, almost all operators were mature and had considerable tenure with the organisation – and many were coming towards the end of their careers. Future replicated studies could look at the factors which influence the engagement of younger employees, and such research then could be followed up with longitudinal studies to understand how attitudes change over time to the engagement concept. Such studies would test Brown *et al*. (2012)'s assertion that an individual's level of engagement can increase over time due to a desire to develop their own identity at work. This study was also predominately with males, and future studies could also examine how gender impacts on engagement levels.
- Examine engagement levels across different organisations: This study has explored engagement levels in a traditional manufacturing environment and it would be useful to be able to compare its findings with different organisations to see if the factors explored in this study (leadership style, followership and autonomy) have the same impact in different settings. Such studies could also allow an exploration of the impact of union membership on engagement levels as this study was of an organisation where there is a long history of union membership. Multiple case studies allow a wider discovering of theoretical evolution and research questions and can create a more convincing theory according to Eisenhardt and Graebner (2007). In this regard, it would certainly be worthwhile to compare this study with another organisation with a non-unionised production environment of a similar size to see if the drivers of engagement are different. Such a study could allow a comparison of the social structures and the organisational culture that exist between unionised versus non-unionised organisations, and the implications for work engagement. Follow up case studies in other organisations could also consider whether the

intrinsic pride which one has in one's work has an influence on engagement – in this study, there was a strong association with work identity, in that the person doing the job could see their work in the final product. There was a certain 'pride', as suggested by several of the participants in manufacturing product for the aerospace sector. This is felt to have contributed to the high perceived engagement levels and it would be worth comparing these findings to other industry types, where the work may be perceived as more mundane and where workers may find it more difficult relating to the final product as something to be proud of producing.

- The researcher chose three specific factors - leadership style, followership and autonomy as these were seen by the researcher as having a significant impact on the engagement of frontline workers. Future research could investigate other influences on engagement factors, such as the impact of technology advancements on engagement. This is an increasing concern for frontline workers, especially in manufacturing roles where human resource requirements can be affected by technological changes designed to reduce the need to manual intervention. According to HayGroup (2014) the 'rules of engagement' are going through significant change where digitization and technological convergence is transforming our everyday lives and as a result we need to rethink how employers can engage staff and earn their loyalty.
- While this study was exploratory in nature and looked at how certain factors influence work engagement levels, a future study could employ other types of similar research such as autoethnography. According to Wall (2006) this is a very good methodology to gather highly personalised accounts that also draw on the experience of the researcher. Action research could also be employed to address work engagement as it allows individuals of the organisation be part of the solution and know they can contribute to the potential outcome (Susman and Evered, 1978).
- Given that all interviews were conducted by the researcher who is employed as a senior operations manager, one could argue that the operator and supervisors were biased and less likely to reveal their true opinions on work engagement, and in particular on their relationships with management. If the interviews had been carried out by a third party with the participants informed that the interview

transcriptions would be presented to the researcher using pseudonyms, the question could be asked as to whether their contributions would have been the same (Dey, 2003). To attempt to lessen the impact of insider bias, the researcher maintained a reflective log for the duration of the research study. This proved to be very effective as it enabled the researcher to question his perspective as a manager and to make adjustments as to how he conducted the research process. Every effort was made by the researcher to minimise this risk, and it is believed that the relatively high age and tenure levels of the operators helped to reduce this risk. Nonetheless, it would be worth conducting a future study of this topic with an independent researcher to conduct the same research with a similar group. This methodology could explore if a positivity bias applies where individuals do not want to reveal negative aspects of their work roles to their direct manager.

Research Integrity

The research community is responsible for defining the criteria for proper research behaviour, maximising the quality and robustness of research, and responding adequately to threats or violations of research integrity. In this regard, the European Code of Conduct for Research Integrity (2017) describes four principles of research integrity to which this study is compared below:

- *Reliability*: this was maintained by making small operational steps throughout data collection process, which allows for others to retrace these steps if an auditor needed to do so in the future (Yin, 2009). The researcher used both quantitative and qualitative methods, to look at the engagement phenomenon (Gibbert *et al.*, 2008) and employed a consistent approach to all research participants in gathering a chain of evidence behind the findings that are presented in this study.
- *Honesty*: The approach taken to gathering and analysing the primary research data for this study particularly the operator interviews was extensive (progressing from a clear outline of the protocol for the interview at the outset to a transcription of the interview transcripts, to an analysis of the key themes

emerging from this data), and the researcher was strongly motivated to report the research findings in a fair and unbiased way.

- *Respect*: Part of the rationale for this insider case study approach was the strong respect that the researcher had built up with the research participants, and the researcher, as a fellow employee of the case study organisation, was anxious that this be maintained throughout the data gathering phase with respondents assured for example that any negative comments regarding supervisors and management would be confined to this research project. In this regard, it was felt that the frankness with which operators described the issues that influence their engagement levels reflects on this mutual level of respect which has been in place for some years prior to this research study.
- *Accountability*: All data gathered for this study such as the survey responses and interview transcripts were organised and managed professionally during supervisor and paper series examiner discussions to ensure that the reported findings were a fair reflection of the data gathered.

Research Limitations

There are a number of limitations inherent within this research. While these have already been outlined in previous chapters, this stage of the thesis represents a timely opportunity for these to be restated.

Firstly, this research was conducted as a single site case study and therefore it is difficult to generalise findings across multiple sites and industries. Siggelkow (2007) believed that choosing a particular organisation may be desirable because it could allow the researcher to gather certain insights that other organisations would not be able to provide. Although this can be perceived as a limitation, the strength lies in the richness of data and therefore must not be misjudged.

Secondly, the researcher is well known to the participants and it could be claimed that he doesn't come to the research with an open mind regarding the subject matter. It is very difficult to carry out this research without any preconceptions. It's good to find out new things about a phenomenon under research, but there's no getting away from the fact that our observations will be influenced by initial beliefs and hunches that we carry with us (Suddaby, 2006). The researcher made every effort to remain impartial

and keep an open mind to various opinions regarding the subject matter. The three factors were chosen by the researcher, and the engagement continuum generated from the framework. This could provide a further limiting aspect, as there could be more factors that also have a huge impact on frontline engagement. The interviews (although allowed for discussion) were semi-structured and therefore did not include other factors outside of engagement related matters. This was intentional and done so to keep within the scope of the research.

Thirdly, while every effort was made to ensure consistency in the collection and analysis of data, differences can occur due to the relationship between the researcher and participants. The researcher felt that the maturity of those interviewed was a significant factor in their candour, and they did not appear to be intimidated or pressurised by the setting and formality of the interviews. Although there was a set template to extract the same information for all those interviewed, there can be differences due to the various working relationships between both parties. While the participants are familiar in having open discussions with their manager, this formal research setting was different, and could benefit from a completely independent researcher completing the interview process. This may be compounded even further in that some questions related to the style of leadership, and this can be deemed a conflict of interest by some who may question if an employee could be completely honest in their opinions of their direct manager.

Fourthly, the researcher took the view that the participants were familiar with the concept of work engagement and its definition. There were no explanations of the theoretical meanings derived from the literature. Although this was deliberate, it could be disputed that if the participants are not clear of the concept being measured, then variation bias can occur in their own perception of being engaged. It has already been shown that concept confusion can occur between work engagement, job satisfaction, organisational citizenship behaviour and extra role performance. Therefore, it would be beneficial to coach the target group on the academic definitions and theory of work engagement prior to a survey. While this may not always be possible, it could augment any confusion to the questions and prevent contamination of results with associated concepts.

Fifthly, it is also possible that engagement surveys have a positivity bias, in that workers like to perceive themselves as being engaged, regardless of the reality. Work engagement is linked to performance, and there is ample evidence to suggest that there is a strong self-serving bias related to employees who self-report on their levels of performance (Johns, 1994). This may be compounded even further when the participant views work engagement as something similar such as job satisfaction, loyalty, worker happiness or pride. These similar concepts can positively influence the findings, as eluded to earlier when discussing the real meaning of being engaged in ones' work. However, the researcher does view the combination of a quantitative survey and follow up interviews as mitigating this potential bias associated with the survey method.

Finally, the author has been singularly responsible for undertaking all aspects of this study under the direction of his research supervisors, and as such, has been subject to the limitations of time and personal resources. Had an option of working in collaboration with other researchers been available, additional data such as additional exploratory interviews would have been collected. As a result, this research has risked exposure to the preconceptions, personal and professional values and potential biases that the author may have brought to the process. Every effort has been made to negate such effects through careful and systematic planning and execution of the study; however, it is appropriate to acknowledge this as a limitation of this study.

Concluding Remarks

The study of work engagement remains a relatively new academic field and while there are alternative views of this construct, it is believed to be unique and distinct from other constructs as according to Kahn (1990:694) when individuals are engaged they 'bring all aspects of themselves – cognitive, emotional and physical – to the performance of their role'. This study has explored the engagement of frontline staff who tend to have low levels of engagement; for example, Anaza *et al*. (2016) found that frontline roles have lower levels of engagement relative to other staff groups. This study is focused on engagement levels of frontline operators in a manufacturing organisation as this staff group have a direct impact on the customer experience and this can offer a competitive differentiation to organisations (Menguc *et al*., 2016; Popli and Rizvi, 2017).

A mixed methods approach was adopted within a case study of a manufacturing organisation and the first phase of the study was a survey of staff to assess baseline engagement levels. This suggested that a relatively high percentage of frontline operators believed that they were engaged; however, a deeper investigation through the semi-structured interviews concluded that approximately the proportion who could be considered to be engaged was one third (34%). Most of the remaining operators are viewed as being engaged within boundaries – with group norms frequently acting as a ceiling on engagement levels. Finally, there were a group of disengaged operators who had high levels of self-awareness which can be linked to less availability to engage in work tasks. The interviews also explored the influence of the three key drivers on engagement levels, and variations were noted; for example, those that were considered to be engaged believed that they were in control of their job, and enjoyed a supportive, shared leadership relationship with supervisors; this contrasts with the disengaged operators who tended to be manged on a transactional basis by supervisors. Of the three factors considered, the followership role emerged as a key impact on engagement levels with those who are considered to be engaged within boundaries fitting into the passive / conforming roles outlined by Kelley (2008). Furthermore, it was found that while there are limits to the extent of autonomy in this manufacturing environment, very few viewed this as an impediment to engagement levels.

These findings have implications for a range of stakeholders in the manufacturing organisation (managers, supervisors and frontline operators) which are considered at the end of this study. From a management perspective, this includes tailoring the leadership approach to the nature of the employees while acknowledging the potential for a more transformational approach to improve engagement levels. For the frontline operators, it highlights the trade-off between the benefits of higher engagement levels such as greater ability to work independently and a greater sense of job enrichment with the limitations such as if one is seen to be violating group norms. These issues can be pursued as future research studies which can extend this work to a wider context.

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SECTION 4: REFLECTIVE LOG EXTRACTS

Omitted from final thesis in the interest of research participant confidentiality