

Lean Moderates Resistance to Change: Literature Review

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Abstract

A leading Shipyard in Malaysia has been trying to change with little success. Much of Resistance to Change (RTC) was believed to be attributed by employee's behaviour. This paper addresses the literature review conducted to conceptualise the framework for a qualitative study to institute change. Theory of Cognitive Dissonance was used to understand and identify the underlying behaviour of the employees. Lean principles were used as in-depth intervention to understand how context provoked or shaped reactions. A Dual Imperative Action Research (AR) with the author as a participant researcher was conducted not only to create knowledge but also, change. Review of previous projects for historical data, face-to-face interviews to get thick description of the RTC and survey using tested questionnaire to gauge RTC disposition. Resistance is due to dissonance created between past and future behaviour. These dissonances, hidden as non-conscious behaviour or dysfunctional habits can lead to organisation deterioration. The knowledge on how researchers can gain utility from resistance would be of considerable benefit to 'change managers'.

Keywords: Resistance to change, action research, theory of cognitive dissonance, LEAN

1. INTRODUCTION

The Shipyard has been trying to change since it was taken over in 2006 but to no avail. The Shipyard has been in existence since 1984 and its people are resilient to change. Many believed that the inability to change is due to the attitude and behaviour of the employees. Cognitive rigidity disposition is high at all levels particularly middle managers depicting a collective culture. Lawson (2003) posits that cultural change is the third and deepest level of change. The resilience of these 'deep structures' as a source of RTC need to be identified, to avoid sole reliant on subjective interventions such as 'top managerial leadership'. A dual imperative AR where the researcher was also a participant, was carried out with the purpose to: 1) identify the source of RTC and implement interventions to facilitate change and, 2) AR as the researcher's abled function for a PhD study. Action Research conceptualised the change process, identifies the intervention, and observe the effect of such behaviour on attitude to change.

Many previous research stress that reasons for failure of many change initiatives can be found in employees RTC (Hinz 1998, Bovey 2001a, Manuela et al 2003, Vakil 2006, Oreg 2003, Pardo et al 2003, Kotter 2007, Ford et al 2008, Keller et al 2008, Pieterse et al 2012, Beal et al 2013, Burnes 2015). Organisational realities as a source of RTC is described by researchers as socially constructed realities (Ford et al 2002), culture (Zabid 2004, Nordin 2010, Zairi 2005, Lawson 2003), shadow organisation (Hinz 1998), and subjective change (Vakil 2006). Heracleous (2001) argues that effective change management is not just about the 'hard' structural aspects of organisations; but, an in-depth appreciation of the human aspects of organisations, and taking actions based on this understanding. Researchers argued that, to understand the subjective experience of change, there is a need to focus on the context of the organisation (Mabin 2001, Oreg 2003, Vakil 2006, Skrudupaite and Jucevicius 2011), or management systems (Ohno 1988). Kotter (2002) argues that trying to shift culture, norms and values before creating the new way of operating does not work. Braganza (2009) posit that organisations need to put in place programs that are meant to realign the culture to be more receptive to the changes being proposed. Researchers has also conceptualise the source of RTC as contextual

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discourse, which should be utilised to understand and influence change (Pieterse et al 2012, Vakil 2006, Heracleous 2001). Mabin (2001) argued that change management literature highlights vision, mission, culture, communication, strong leadership and participation as prerequisites for successful change, but not how they are achieved. Mabin suggested that, without any of these prerequisites change will fail due to resistance, therefore, the need to identify resistance, define strategies and create action plans for a complete and successful implementation.

This Action Research attempts to: 1) identify the source of RTC by focussing on the context of the organisation (objective) and its subjective change by using Meyer and Allen (1991) Behavioural Perspective on Organisational Commitment model as the framework, 2) explore the relationship between contextual change and its impact on behaviour and attitude using principles from Theory of Cognitive Dissonance and 3) investigate how Lean, Kaizen are used as interventions to identify and resolve conflict, thereby creating a new way of operating for a successful change. The research method shall include review of secondary data, semi-structured interviews using open-ended questions, participants observations, field analysis and survey to reveal hidden assumptions. To sustain, the Shipyard will be put into a series of iterative AR projects aimed at proselytizing democratic-participatory values into normative and attitudinal belief, towards Lean. Lean behaviour when repeated will develop into habits and eventually a new organisational culture.

There are several contributions from this research; 1) contextual discourse is embedded as institutionalised habits creating cognitive dissonance, 2) dissonance was only realised through in-depth intervention using Lean and Lewin's field theory to establish a state of psychological disconfirmation, 3) implementing action research to gain in-depth knowledge on how ship repair projects were successfully delivered through change, 4) importance to focus on the context that provoked or shaped RTC rather than individual's reaction, 5) findings supports Meyer and Allen (1991) behavioural perspective model in identifying conditions under which a behaviour, once exhibited tends to be repeated, as well as effects of new behaviour on attitude change, that is, when people believe in its overall purpose, they will be happy to change their individual behaviour to serve that purpose, if they don't, they will suffer from cognitive dissonance and subconsciously slip into organisational deterioration (Karube et al 2009, Robbins et al 2011, Burnes and James 1995).

The purpose of this research is to; 1) identify the source of RTC, 2) examine the effectiveness of the change initiatives implemented and 3) understand how the interventions influence behaviour. AR was adopted to apply a constant and iterative reflection as part of the change process and to create new knowledge. A theoretical framework that conceptualise change as part of an ongoing organisational discourse based on theory of cognitive dissonance was used as a communication strategy to understand the conditions required for organisational change. Lean is demonstrated as a control intervention responsible to create the condition for contextual change and Lean behaviour.

2. LITERATURE REVIEW ON RESISTANCE TO CHANGE

2.1 An overview of employee RTC

Change is critical for an organisation's survival when current norms and basic assumptions, can lead to organisational deterioration (Karube et al 2009). Organisational change is defined as the application of strategies based on behavioural sciences to make changes at work to improve performance by modifying employee behaviour (Beal et al 2013). Piderit (2000) forward Lewin's definitions of resistance as 'a restraining force moving in the direction of maintaining the status quo', giving rise to the force-field theory (Lewin 1947). Source of RTC resides in the individual values (Ford et al 2006), expressed as shared conception of what is good and desirable in the culture (Oreg 2006). Resistance is attributed to employee's attitude; cognitive and affective processes (Smollan 2009) and management behaviour (Piderit 2000, Bovey 2001a). Piderit (2000) suggests resistance as a particular kind of inaction, intentional acts of defiance and willingness to deceive authorities. There is a need to construct communication strategies at the subjective level, since that is where meaning resides for individuals (Vakil 2006, Hinz 1998).

Literature on RTC is mainly discussed within three perspectives; 1) constructed reality or organisational culture (Zabid 2004, Nordin 2010, Zairi 2005, Lawson 2003, Hinz 1998, Lawson 2003, Blanford 2002, Burnes and James 1995, Heracleous 2001, Barnard et al 2001, Goffee and Jones 2003, Yahyagil 2004, Oreg 2006, Graafland 2006), 2) organisational context (Kotter 2002, Oreg 2003, Mabin 2001), management systems (Ohno 1988) or techniques (Skrudupaite and Jucevicius 2011) and 3) both, culture and context (Vakil 2006, Bhasin and Burcher 2006, Bovey et al 2001a, Mdletye 2014, Burnes and James 1995).

2.1.1 *RTC in constructed reality or organisational culture*

Organisational culture is defined as a set of shared values, beliefs, assumption and practices that shapes and guides members' attitude and behaviour in the organisation (Yahyagil 2004), integrated pattern of meanings, beliefs, norms, symbols and values that individuals hold within a society (Oreg 2006) and an aggregate of what is common to all of its group and individual mind-sets (Lawson 2002). There are many arguments as to what cause RTC. Ford et al (2002) argued that RTC is not to be found "in the individual", but in the constructed reality in which the individual operates. Skrudupaite and Jucevicius et al (2011) posits that many authors focus on organisational culture as an obstacle or needed behaviour critical for successful implementation. Waddel and Sohal (1998) submit that, people do not resist change; rather they resist the uncertainties and the potential outcome that is caused by change. Vakil (2006) forward that, RTC develop when the organisation is divided between antecedent and subsequent organisation. Mdletye et al (2014) suggested that RTC arises from the disequilibrium between forces that support and forces that oppose change. Hinz (1998) argued that RTC evolve from the gap between legitimate and shadow system of the organisation. Karube et al (2009) argued that, conflict arising from difference in beliefs and standards gives rise to organisational deadweight. However, researchers agrees that the realities resides in the culture, values, norms and basic assumptions (Goffee and Jones 2003, Chapell et al 2003, Zabid 2004, Karube et al 2009) and its effect on performance can only be inferred, thus the need to adopt a new perspective towards change by focusing on individual attitude and behaviour (Festinger 1957, Meyer and Allen 1991, Piderit 2000, Burnes and James 1995, Heracleous 2001, Burnes 2015, Zabid 2004, Yahyagil 2004, Jones 2007).

2.1.2 *RTC in organisational context*

Paradoxically, researchers argued that to understand the subjective experience of change, there is a need to focus on the context of the organisation in terms of its history and prevailing discourse (Ohno 1998, Dent 1999, Graves and Crute 2000, Nelson 2003, Brydon-Miller et al 2003, Oreg 2003, Pieterse et al 2012, Heracleous 2001, Kotter 2002, Mabin 2001, Skrudupaite and Jucevicius 2011, Beale 2009, Ajzen 2009, Ogbonna 2003, McKay and Marshall 2001). Mabin (2001) emphasised the importance of understanding organisational context by quoting Pascale; "to transform itself an organisation need to tackle its very core - its context - the underlying assumptions and invisible premises on which its decisions and actions are based". Stone (2010) quoted Swanson and Holton, "Deming estimated 90 percent of the problems that might be blamed on individuals in the workplace were a result of having them working in bad processes or systems". The predilection of choosing between focusing on organisational culture and context is further argued by Skrudupaite and Jucevicius (2011) by quoting Edgar E. Schein; 'Never start with the idea of changing culture. Always start with the issue of organisation culture, only when those business issues are clear should you ask yourself where the culture aids or hinders resolving the issues. Always think of the culture as your source of strength'. Kotter (2002) reiterated that, trying to shift the norms and values before you have created the new way of operating does not work. He further suggested that a culture truly change when a new way of operating has been shown to succeed over some minimum period of time. Graves and Crute (2000) forwarded, those traditional companies which recognised the gap between current and a later culture which promotes Lean thinking and continuous improvement may still choose to focus on culture change rather than the context. In other words, change drivers tend to focus on individual's reaction to change rather than how context provoked or shaped that reaction (Mabin 2001, McKay et al 2013, Mdletye et al 2014). Burnes (2015) suggested to examine the depth of intervention, since change itself is the cause of resistance rather than any innate propensity in individuals. Bhasin (2012) suggested that, it is imperative to anchor the appropriate behaviour to create a favourable culture before focussing on change techniques such as Lean.

2.1.3 *RTC in both culture and context*

The third perspective of RTC argues that, resistance occurs at two levels simultaneously, Vakil (2006) concrete (objective) and socially constructed (subjective) level, Braganza (2009) context and culture, Bhasin and Burcher (2006) organisational and technological aspects of quality management, and Bovey et al (2001) organisational and human needs to be balanced. Mdletye et al (2014) surmised that 1) systemic resistance emanates from the lack of relevant knowledge, information, skills, competencies and managerial capacity, while 2) behavioural resistance originates from perceptions, reactions and assumptions of individuals or groups of people within the organisation. It is critical for change drivers to understand, how human elements influence change (Bovey 2001a), how employees feels about change Vakil (2006) and how employees are evaluated as the prime source of RTC (Mdletye et al 2014). There is a need to discuss link between culture, attitude and behaviour within the dynamic process of organisational

context. Burnes and James (1995) suggested that, this is done by evaluating the context of the cultural disruption and cognitive dissonance generated.

2.2 The theory of cognitive dissonance

Change challenge the attitude and behaviour of individuals, giving rise to a high degree of cognitive dissonance. The relationship between organisational culture and individual attitudes and behaviour is clearly linked, and it is important to understand what this link is and how it affects the change process (Burnes and James 1995). When individuals demonstrate symptoms of resistance, it is important to distinguish the symptoms of resistance and the causes behind it (Bovey 2001b), attributed either by cultural or contextual discourse. Canning and Found (2015) provided an example of dissonance, where a survey shows respondents support change, however, in reality there exist a weak relationship between involvement and support. Thereby, an intention to engage in a particular behaviour may not be sufficient for the behaviour to occur and intentions may turn out to be poor predictors of behaviour (Ajzen 2002), thus giving rise to cognitive dissonance. Dissonance also occurs when organisation talks about process change but has difficulties changing norms, for examples, 1) focus on results-only biased type of model rather than process (Karube et al 2009), thereby promoting a maverick type culture where, 'if it works use it', or 'ends justify the means' as standard behaviour (Robbins et al 2011) and 2) existence of a shadow organisation (Hinz 1998) that promotes result-oriented culture (Hinz 1998) at the expense of compromising processes, resulting in organisation deterioration (Karube et al 2009), giving rise to complacency, resignation and cynicism are realities to which people are blind (Ford et al 2002).

De Cock (1996) forwarded that managers begin to realise that they are not tolerant of paradoxes and ambiguities. Mabin et al (2001) argued that most of the time companies are conflict averse, associated with wounded egos, harmed relationships and turf wars. Goffee and Jones (2003) suggest that only a brave and smart company pays a lot of attention to dynamics that can only be inferred. Organisation which realises there is a gap between prior and a later culture, need to search for initiatives that can help them to change (Graves and Crute 2000, Ajzen 2002). Contention is often mistaken as an indicator of mismanagement and the theory of cognitive dissonance proves extremely influential in order to understand the largely invisible patterns of thinking and behaviour (Mabin 2001), and for managers who want to manage and support employees who are affected by the change (Mletye et al 2014). Researchers finds it important to explore how psychologist attempted to understand and explain human behaviour, thereby the need to understand the Theory of Cognitive Dissonance (Burnes and James 1995, Heracleous 2001, Harmon-Jones et al 2007, Beal 2009, Smollan 2009, Robbins et al 2011, Burnes 2015).

2.3 Self-awareness of the organisational realities

Kotter et al (2002) argued that the core problems in implementing change is "changing people's behaviour". What people do are surface manifestation of the deep level values they hold and much of firm's is tacit, a reflection of general habits and strategic orientation coming from firm's past (Duhigg 2014). To understand how actions can be improved, we need to tap our deep tacit knowledge and raise it to an explicit level of awareness (McNiff and Whitehead 2000).

The theoretical framework (see Fig. 1) adopted from Meyer and Allen (1991) was used to; 1) understand the tacit nature and governing assumptions of RTC, 2) conceptualise intervention strategies to reduce the level of dissonance caused by the change, and 3) understand the effects of the intervention on behaviour and 4) ensure that the new behaviours, values, and beliefs are not in conflict with the final process (Heracleous 2001). The behavioural perspective model towards change would provide a deeper level of understanding of the effects of the intervention and identifying conditions under which a behaviour, once exhibited tends to be repeated (Meyer and Allen 1991, Ajzen 2002).

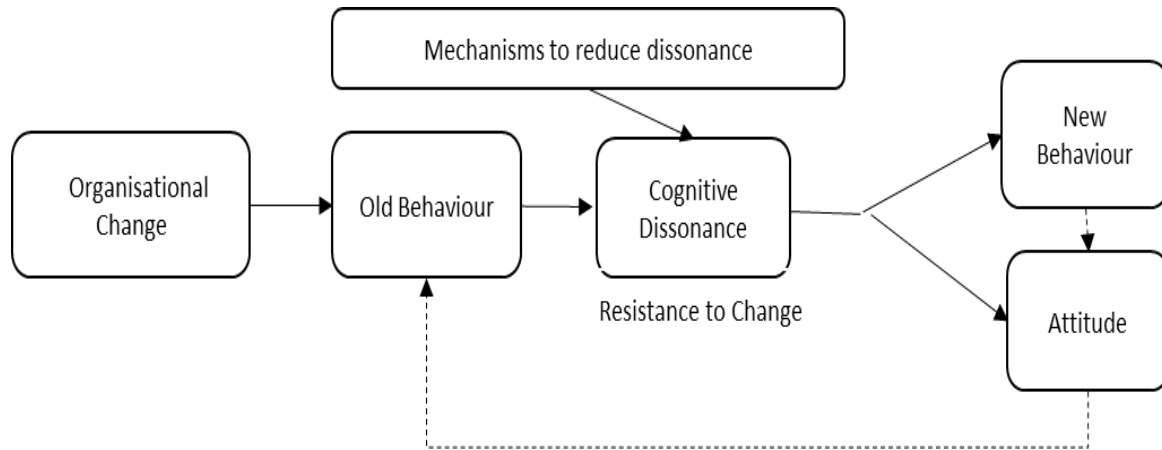


Figure 1: Theoretical framework - Behavioural perspective towards reducing RTC

2.4 Identifying the source of resistance

The relationship between external stimulation and internal psychological experience of individuals is known as psychophysics. It is a fundamental psychological approach, whereby the external world is represented in the mind as a process (Hunt 1975). In order to identify the source of RTC hidden beneath the norm, organisations need to learn to disagree without being disagreeable and channel contentions as a self-questioning organisation (Mabin 2001), giving rise to the term ‘let’s celebrate the problem’. For successful behaviour change (Burnes 1995, Kotter 1997), management need to implement intervention strategies and techniques that firstly create self-awareness and secondly develop process to eliminate irrational thoughts (Bovey 2001a), which give rise to “fat behaviour”. “Fat” behaviour (the opposite of Lean) is behaviour that adds no value or ‘waste’ (Emiliani 1998). These self-defeating behaviours impedes flow between people because its primary operating mechanisms include deception, gossip, innuendo, half-truths, lying, revenge, and destructive political behaviours driven by high ego (Emiliani 2004). Fat behaviours are recognisable as lots of talk where nothing has actually been said, or indirect words whose meanings are subject to interpretations (Emiliani 1998). He further suggests that companies generally tolerate disruptive personalities found in the workplace due to their technical, historical or functional knowledge, disregarding the enormous negative impact that such behaviours have on organisations. Bovey et al (2001b) described 11 cognitive distortion as follows; 1) tunnel vision, 2) selective abstraction, 3) arbitrary inference, 4) overgeneralisation, 5) polarised thinking, 6) magnification, 7) biased explanations, 8) negative labelling, 9) personalisation, 10) mind reading and 11) subjective reasoning. The result is local or widespread confusion, negative emotions, stress, frustration, defensiveness, and deterioration of the social structure. These dysfunctional and non-conformance practices consumes psychological (Emiliani 1998) and management resources (Karube et al 2009). It is nearly impossible for most people to see the destructiveness of fat behaviours because their mindset constitutes the form and substance of this mental model (Emiliani 1998), thus, businesses that fail to realise and change their behaviour will risk the future existence of their entire enterprise (Karube et al 2009).

Researchers have developed various instruments to identify these underlying behaviours with the intention to predict individual reaction to change. Oreg (2003) and Oreg et al (2008) designed and deployed the RTC Scale to measure individual’s dispositional inclination to resist changes based upon 4 reliable factors: 1) routine seeking, 2) emotional reaction to imposed change, 3) cognitive rigidity, and 4) short-term focus. Oreg (2003) described the rigidity of the mental mode or mindset as cognitive rigidity a RTC disposition. Beal (2009) explored employees intention to adopt Lean behaviour using the Theory of Planned Behaviour (TPB) model developed by Ajzen (1991). TPB model has been used by many researchers to predict behaviour intentions (Beal 2009, Jimmieson et al 2008, Oreg et al 2006, Ajzen et al 2011). According to TPB, predictors of behaviour are behaviour intentions, antecedent by 1) attitude towards the behaviour, 2) subjective norms and 3) perceived behaviour control (Ajzen 1986, Ajzen 1991, Ajzen 2005, Oreg et al 2006, Beal 2009, Jimmieson et al 2009). TPB identifies the beliefs underpinning each of the constructs (Ajzen, 1991, Peach et al 2005, Jimmieson et al 2009, Ajzen 2011). A central factor in TPB is the individual’s intention to perform a given behaviour (Ajzen 1991). Perceived Behavioural Control (PBC) can indirectly affect behaviour via intentions, and/or have direct effect on behaviour (Ajzen 1991, Ajzen 1986, Jimmieson et al 2008). In addition to

changing behaviour indirectly through behavioural intentions, behaviour may be changed by introducing mechanisms to influence controls over behaviour (Madden et al 1992).

2.5 Understanding individual's underlying beliefs

Before introducing an intervention that would improve intentions to change or influence controls over behaviour, researchers proposed to examine the effects of individuals' beliefs underlying Attitude, Norms and PBC. Jimmieson et al (2008) suggested that strategies should focus on changing the more personal factors underlying behavioural decision-making. These are underlying assumptions and invisible premises on which decisions and actions are based (Mabin 2001). Jimmieson et al (2008) proposed that, underlying beliefs distinguish between intenders and non-intenders for a specific behaviour. Peach et al (2005) forwarded the need to progressively measure underlying beliefs and intentions across successive stages of an organisational change program. The understanding of individual's belief is more important when; 1) intention is weak, 2) underlying expectations are inaccurate and 3) people have no plan of action (Ajzen 2002). These subjectively held beliefs influence the intentions and actions linking it to positive or negative support (Ajzen 2011).

However, TPB has limitations in predicting behaviour intention due to; 1) inaccurate or unrealistic behavioural, normative and control beliefs; 2) weak or unstable attitudes and intentions; and 3) lack of planning for implementation of an intended behaviour (Ajzen 2002). He further suggested that, some people fail to carry out their intentions and instead revert to past patterns of behaviour due to habits. Habits or past behaviour can influence future behaviour in two ways; conscious and non-conscious. Action from past behaviour or 'conscious response' may provide information which can be used to mould future behaviour. 'Non-conscious', however, are behaviours performed repeatedly or habits enacted automatically with minimal efforts (Ajzen 2002). Duhigg (2014) argued that, organisations are guided by long-held organisation habits emerging from thousands of employee's independent decision, and these habits have a profound impact than anyone previously understood. When behaviour is habitual, past processes weaken change intentions.

In summary, the ontology of this research is to raise questions with regards to the true nature of reality and human behaviour about RTC. There is a need to question the influence of past behaviour to the latter as a source of RTC. The stability of past behaviour and intentions are factors contributing to RTC. The residual effect on later behaviour and its frequency is a reflection of the factors which are not fully mediated by the constructs of TPB (Ajzen 2002). Like TPB, there are many studies which examines statistical associations between measures of habit, attitudes, intentions, and behaviour, but, do not reveal the processes underlying these relations. There is little empirical attention given to the cognitive processes underlying habitual behaviours (Aarts et al 1998). It is of far greater importance to find the relations between prior and later behaviour (Beal 2009), and explore the factors involved in going from beliefs to actions (Ajzen 2002). A well develop study is required to empirically explore past behaviour, in order to identify underlying factors and non-conscious habits giving rise to RTC.

3. RESEARCH METHOD

The identification of the underlying factors attributing to RTC will be guided by Festinger's Theory of Cognitive Dissonance and presented using Lewin's Field Theory as restraining factors towards performance. Participatory Action Research is employed as one of the research method to explicitly develop praxis of relational participation between the researcher and employees. Lean will be used as the mediating mechanism to reduce dissonance. Both AR and Lean is used as interventions to rationalise what constitute as valid knowledge about behaviour and its social world, thus contributing towards the epistemology of the research.

3.1 Participatory action research

This research is built around a project team that is formed to address the issues confronting the organisation and work in an action learning mode (Coghlan and Shani 2013). A Dual Imperative Action Research (McKay et al 2001) with the Shipyard as the source of data has been commissioned to study and fill skills or knowledge gap preventing change (Costley et al 2010). A single longitudinal study (Styhre 2002) of the Shipyard was undertaken from Nov 2013 to Oct 2016, to enable a thorough and in-depth understanding of the change processes and events that unfold over time. The researcher who is also the participant member of the system will be involved in the inquiry process itself (Coghlan and Shani 2013, Coghlan and Brannick 2014, Brydon-Miller et al 2003, Dent 1999, Zuber-Skeritt and Perry 2002,

Avison et. al. 2001, Styhre 2002), contributing to organisational change by taking an active role in the operation and studying the process (Avison et. al. 2001, Styhre 2002). This is best way to achieve dynamic change (Dent 1999). The search for alternative change methods, documenting techniques applied and how managers gained utility from resistance through in depth action research is invaluable (Waddel and Sohal 1998). The distinct feature of action research is that, it generates insight not only to explain but also to change (Coughlan and Brannick 2014).

Action as an integral part of field methodology differentiates AR from traditional research (Cassel and Symon 2004). AR aims both at taking action and creating knowledge of action (Coughlan and Coughlan 2002). The result is an action and a research. AR is an interdependence of theory and practice, a collaborative management research towards adding to the body of knowledge in the field of management (Coughlan and Brannick 2014). Action researchers and the organisation 1) develop action plan to address the issues and implement them, 2) together they evaluate the outcomes of the actions, both intended and the unintended, and 3) evaluation may lead to further cycles of examining issues, planning action, taking action and evaluation (Cassel and Symon 2004). Some characteristics of AR as defined by researchers, (Coughlan 2002, Coughlan and Brannick 2014, McKay et al 2001, Chandler and Torbett 2003) are as follows: 1) action oriented, 2) solve real organisational problems, 3) applied behavioural science knowledge, 4) bring about improvement, and 5) generate new knowledge. AR is appropriate to understand how and why; 1) action can change or improve the working system, 2) applying constant and iterative reflection as part of the process for change and 3) an emergent inquiry and evolving process. Brydon-Miller et al (2003) intimated that, fundamental to action research is the idea that the social world can only be understood by trying to change it. When employees demonstrate symptoms of resistance, it is important to distinguish the symptoms of resistance and its causality (Bovey 2001b). The source of resistance as a norm is hidden and invisible to other forms of inquiry, thereby requiring the commitment of action researchers to bring about change as part of its research. Bhasin (2012) argued that no organisation change is the same as the other. Each organisation is unique and has distinct problems and constraints. Thereby, it's futile to replicate strategies from other organisation. Organisation undergoing change, need to be subjected to rigorous inquiry, particularly the analysis and implementation of action. The commitment to action to bring about change, differentiate AR and other forms of inquiry (Coughlan and Coughlan 2002), particularly when human behaviour can only be understood and change if one is involved in the inquiry itself (Coughlan and Brannick 2014). Many of the AR projects are carried out on case by case basis and perform well in a local situation but fail to extend beyond local context (Brydon-Miller et al 2003). It has difficulty intervening in large-scale social change effort. Zuber-Skeritt and Perry (2002) argued that researches conducted at universities have little relevance to managers involved in organisational learning.

3.2. LEAN moderates resistance to change

Stone (2010) delineates Lean terminology as follows; 1) Leanness; to describe the end state, 2) Lean thinking/operational philosophy; to describe the process that achieves the end state, and 3) Lean principles; to describe the tools used to execute the process. There are many facets of lean principles that contribute to successful Lean transformations, Stone (2010) suggested Kaizen as fundamentally essential for Lean interventions. Based on Ohno's principle, Harada (2015) theorised that "Kaizen is equals to going closer to the final process", and Emiliani (2008) described Kaizen as "change for the better", where people continuously improve standardised work. Beal (2009) forward that, Kaizen is striving for perfection, where employees at all levels are encouraged to constantly look for ways to eliminate waste. Kaizen is governed by constant and iterative reflection in change process and continual improvement, a principle consistent with the Action Research quality criteria (Coughlan and Coughlan 2002). In order to enhance employee's willingness to adopt Lean behaviour, organisations need to create improvement projects and encourage employees to apply Lean principles in their work (Beal 2009).

Emiliani (1998) theorised that self-defeating behaviour of individuals or groups has not been effectively recognised as 'waste' in Lean concept. Tasie (2009) submitted that the African approach to management is much filled with conflicts, unhealthy politics, futile confrontation, bitter political manoeuvring, favouritism, persecution and many more. These 'fat behaviours' create crisis and managers who are reactive and passive in nature, living in the present and not the future. Emiliani (1998) further suggested that, the same revulsion for waste developed in the context of poor interpersonal relationships should be accorded to improve behaviour and productivity. To address these subjective experience, researchers suggest to focus on the organisational context, (Kotter 2002, Oreg 2003, Vakil 2006) or management systems (Ohno 1998). Lean management can change an organisation's mental model to reduce workplace confusion by designing work to be unambiguous and direct (Emiliani 1998). Employees will be more

favourable to adopt Lean behaviour, if they perceived that Lean enhances work experience and organisation prosperity (Beal 2009).

Researchers asserted that TQM and Lean strategies are essentially effective for cultural transformation (Burnes 2015, Beal 2009, Emiliani 1998, McNiff and Whitehead 2000, Alagaraja 2014, Vainalis 2012) and Lean philosophy is very much applicable when dealing with RTC (Beal 2009, Alagaraja 2014). Lean methods can be tailored to address the level of dissonance at the macro-organisational and micro-level targeting resistance in the individual (Alagarajah 2014), within the system or force-field (Burnes 2015), or when change is out of step with attitude (Burnes and James 1995). Emiliani (1998) emphasised that, “the devils is in the details”, where detail data and analysis can help improve the business. Jimmieson et al (2009) suggested that, attempts to change behaviours should focus on the positive outcomes of these behaviour rather than challenging feelings about the negative. Lean philosophy does not put the blame to individual’s innate propensity to perform (Burnes 2015). The greater the effect on the individual, especially in terms of psychological constructs and attitudes, the deeper the level of involvement is required (Burnes and James 1995). Organisations should study how Lean behaviour can be cultivated by learning, and applying Lean philosophy (Vainalis 2012). Lean management practices have been an integral influence on organisational change success rates. The guiding framework for developing large-scale change efforts is underexplored in the Lean literature (Alagaraja 2014). Therefore, mediating mechanisms through which specific techniques exert their effects on change-supportive behaviour would be worthwhile for future research (Jimmieson et al 2008).

3.3 Data collection

Primary data are collected from observations, interviews and outcome of twenty-one recursive AR projects documented as progress reports. Field Notes are taken during daily and weekly brief, meetings and inspections, to record accounts of conversation, observations and experiences that would directly or indirectly contribute to the study. A digital recorder is used to tape interview with the participants, meetings, discussions and preceded with a request to record. The interpretation and findings are further triangulated, challenged, supported or disconfirmed based on findings from survey, interviews, secondary data and core action research projects. A survey using Oreg (2003) RTC Scale, was conducted for the entire population of the Shipyard (900 employees) to gauge their disposition with regards to RTC. This data is invaluable in identifying target segment and outlook towards change.

Secondary data based on documentation review was conducted to position the research in its historical and cultural context. Archaic analysis of documents such as progress and audit reports, minute of meetings, notes of discussions, schedules, reviews and surveys were conducted. These documents exist in a situation that they do not intrude or alter the setting in ways that the researcher might. The documents are also not subjected to human whims during interviews or through observations (Merriam 2002).

The primary data from the core AR projects and secondary data were analysed using the Grounded Theory Study to identify an abstract analytical schema of an action or interaction shaped by the views of larger population (Creswell 2007). Grounded theory was used to identify; 1) source of RTC or dissonance factors thematised as restraining forces, and 2) consonant factors from twenty-one core AR projects or the driving force. The findings from both primary and secondary data are triangulated to provide contradictory and confirming interpretation. These findings are then presented to all levels of management hierarchy up to the Board of Directors to be validated in a consensual manner in meetings known as ‘mirror-effect’ session (Cappellatti and Baker 2010).

In-depth face-to-face interviews with selected key personnel comprising of middle managers and supervisors (Daymon and Holloway 2002, Yin 2009) using open-ended questions were conducted for in-depth qualitative study; 1) for deep and narrow exploration of a phenomenon (Daymon 2002), 2) to gauge the deep assumption of change and its effects and 3) develop insight of the values and assumptions that characterise the culture (Ogbonna 2003). Middle managers have been identified as individuals who can purposefully inform and understand the research problem and central phenomenon in the study. The managers’ experiences and responses (Costley 2010, Cassel and Symon 2004, Drew et. al 1996) on planned cultural changed is critical for the study (Ogbonna et. al 2003). Backbone of qualitative research is the extensive collection of data, typically from multiple sources of information (Creswell 2007). The researcher and the organisation developed action plan (Cassel and Symon 2004) based on best practices, Lean and Kaizen to address issues. Together they evaluate the outcomes of the actions, both intended and the unintended through review meetings. This evaluation will lead to further cycles of examining issues, planning action, taking action and evaluation through active participation. Lean and Kaizen were used as in-depth intervention to help establish a state

of psychological disconfirmation to generate dissonance. AR will investigate and document how, as an example, Lean Project Planning (Emblemsvag 2014) was successfully implemented in Shiprepair with opportunity for improvement. The Behavioural Perspective Model focused on conditions or context which provoked change (Burnes 2015), used as an action-based model to reduce dissonance (Harmon-Jones et al 2007). Lewin's field theory (Lewin 1947) focused on studying the effects of implementation in the form of intervention. Data collected from archaic analysis of documentation, interviews, survey, observations and AR (Coughlan and Brannick 2014) was analysed using ATLAS.ti 7. Validation is through the learning-action process itself and, through co-interpretation of outcomes with the participants (Cassel and Symon 2004) in meetings, trainings and continuous improvement projects.

4. CONCLUSION

This research was collaboration between the employees and researcher to identify the source of RTC. The outcome is both, insights to create change and knowledge. The respect the researcher has for the complexity of the Shipyard and the knowledge gained through the process was an impetus to understand how the person thinks and want, creating praxis of relational participation, hence, a quality unique to AR (Coughlan and Coughlan 2002). The research draws power from the promise of pragmatism, i.e. beliefs we can know only through doing (Brydon-Miller et al 2003), and from the knowledge of individuals and group behaviours (Emiliani 1998). Employees will most likely be more supportive with change projects that are aligned with individual and organisational beliefs and behaviour. Therefore, meaningful context driven actions such as Lean and AR, is useful to encourage the more reticent employees to embrace change, and happily change their individual behaviour. The struggle for congruency between espoused and enacted values can only be achieved when dissonance are clearly identified and mediated. Otherwise the organisation will suffer the effects from its non-conscious habits and subconsciously slip into organisational deterioration. The significance of this study is the realisation of how individual and group past behaviour can subconsciously challenge the existence of the organisation and that better methods live within the study of subject such as Psychology, Lean, Action Research and Resistance to Change. The knowledge on how the researcher gained utility from resistance and mediate through the application of these techniques would be of considerable benefit to leaders of change management.

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