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A Dialogical Action Research Approach to Innovation *as* Organisational Change

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Abstract

This paper argues that dialogical action research (AR) recently proposed by Mårtensson & Lee, provides a novel framework for both relevant and rigorous collaboration between academics and practitioners. The work is presented in the context of a case study of innovation in APC-MGE Ireland, a subsidiary of the critical power and cooling services division of the Schneider Electric Corporation. The paper addresses the thematic aspects of ALOIS by arguing that the Hermeneutics of Hans-Georg Gadamer offers a solid philosophical underpinning for dialogical AR. Suggestions are also proposed to assist further development of the research methodology.

Keywords: innovation, organisational change, dialogical action research, phenomenology, hermeneutics.

1   Introduction

This paper argues that dialogical action research (AR), recently proposed to the IS community by Mårtensson & Lee (2004), provides a novel approach to address the perennial call for more relevant and rigorous collaboration between academics and practitioners. The work is presented in the context of a case study of APC-MGE Ireland, a subsidiary of the critical power and cooling services division of the Schneider Electric Corporation. The research proposes to make a contribution by presenting a study of using dialogical AR as an impetus for the process of change involved in the re-orientation of a subsidiary to an innovative organisation. Furthermore, the work builds on Ciborra's challenge to return to the "origins of phenomenology" and argues that the philosophical hermeneutics of Hans-Georg Gadamer can provide a solid underpinning for dialogical AR. The paper now proceeds as follows. Firstly a literature review is provided on innovation and organisational change building on the work of Zaltman et al.(1973) and using the taxonomy of innovation theories developed by Slappendel (1996). The paper then addresses the thematic aspects of ALOIS by discussing the Hermeneutics of Hans-Georg Gadamer with his emphasis on engagement with practice and the importance of language. Following this, the background and context of the case study is presented. Next the research approach is outlined and the scope of the research question and data collection are described. Subsequently, the case is examined in light of models of organisational change and of the innovation theory presented earlier in the paper. Finally the conclusions of the study are presented and suggestions made for future work.

2   Background

The purpose of this initial section is to place the study within established research and theory in the areas of innovation, leadership and organisational change.

2.1   Innovation and Organisational Change

One of the main challenges for an organisation that is committed to innovation is to successfully undertake the process of changing to an innovative culture. This task is also spoken of as the challenge of generating an organisational "climate" with the increasing evidence of its positive link to innovation effectiveness (Leavy, 2005). According to Zien & Buckler (2004) successful companies create a culture where everyone participates in innovation and where it is seen as the fundamental way to provide value to customers. Tidd et al. (2005) propose that innovation must not be seen as a lottery but as a continuous improvement process and point out that, based on recent research on innovation successes and failures, a number of models have been developed to help assess innovation management performance. In order provide some initial reference point on innovation management, they have developed an assessment tool and audit framework. Such self-assessment tools have been widely used in the area of total quality management (TQM) in order to benchmark an enterprise against best in class, for example, the Malcolm Baldrige National Quality Award. The framework proposes five dimensions under which innovation management are to be assessed and profiled: strategy, process, organisation, linkages and learning (Tidd et al., 2005). Significantly for this study, the firm's distribution of innovation capability is classified in terms of four organisational types assessed in relation to: "the awareness of the need to change" and "awareness of how to change" that is shown in figure 1.
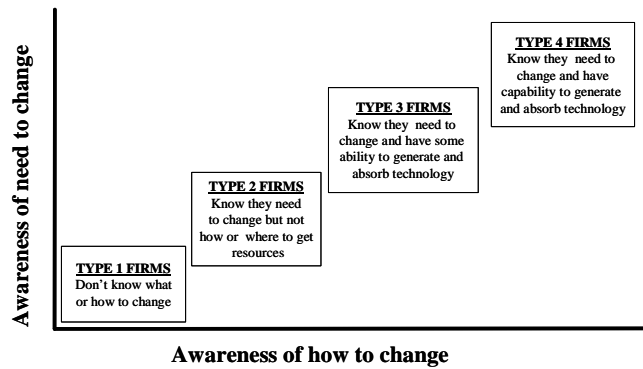
Figure 1: Innovation capability and organisational change adapted from Tidd et al. (2005)

The work of Zaltman et al. (1973) , we argue is important when attempting to link innovation to organisational change. In this work the authors define innovation as "any idea, practice or material artifact perceived as new by the relevant unit of adoption". This perception of newness, moreover serves to differentiate innovation from change and they go on to comment that while all innovations imply changes the converse is not always the case since "not everything that an organisation adopts is perceived as new" (Zaltman et al., 1973) . In this work they developed their contingency theory of innovation which predicts that the effect of structural variables will be contingent on the two main stages of the innovation process: initiation and implementation. Dialogical action research involves, as its centre piece, regular one-to-one dialogues between a practitioner and a researcher. The practitioner in this case was the leader of an MNC subsidiary so we will begin by reviewing a model of leadership and organisational change.

2.2 Leadership and Organisational Change

In this section we will present Nadler & Tushman's (2004) typology of organisational change and their model of leadership. These models will be used later to analyse the case study and in particular to examine the role of leadership which is central to the concept of dialogical action research: a major theme of our study. In the first place, the authors assert that the literature is very consistent about at least one aspect of implementing a major process of change in an organisation: namely the critical role of the leader. However, a central argument of their thesis is that leadership vision, charisma and inspiration is not enough to sustain a significant change initiative. In their model, they illustrate that organisational changes vary along two dimensions:

- *Strategic and Incremental Change.* Here the aim is to enhance the effectiveness of the organization within the existing general framework of "strategy, mode of organizing and values".
- *Reactive and Anticipatory Change.* In the former case changes are made in direct response to external events and in the latter case, change is initiated in anticipation of events to come; in order to proactively obtain competitive advantage.

They then combine these dimensions in the model shown in figure 2.

	Incremental	Strategic
Anticipatory	**Tuning**	**Re-orientation**
Reactive	**Adaptation**	**Re-creation**

Figure 2: Types of organisational changes adapted from Nadler & Tushman (2004)

On the subject of leadership, they then propose that the different types of organizational changes above require a variety of leadership styles. One type of leadership that appears to be very important during a period of organisational change is given the label "charismatic" leader. However they are at pains to point out that this concept of "charisma" does not fit the popular stereotype of a populist speech maker or television personality. Rather, this type of leadership aims to bring about changes in the "values, goals, needs or aspirations" of the people in the organisation and exhibits three basic patterns of behaviour: envisioning, energising and enabling. However studies have demonstrated inherent risks and limitation of this type of leadership approach associated with a single individual such as: creating unrealistic expectations, dependency and counter dependency among staff, reluctance to disagree and the disenfranchisement of next levels of management. Furthermore, effective organisational change programs seem to be characterised by other leadership roles such as the ability to build teams, implement measurement processes and reward systems, and ensure that people at all level are motivated and empowered to instigate and implement change. They call this instrumental leadership which involves three types of behaviour:

- *Structuring*: building teams, setting goals and planning what to do.
- *Controlling*: creating systems and processes to measure, monitor and assess behaviour and results.
- *Rewarding*: administer rewards and correct behaviours where necessary

The concept of instrumental leadership is illustrated in figure 3 with charismatic leadership as a subset.
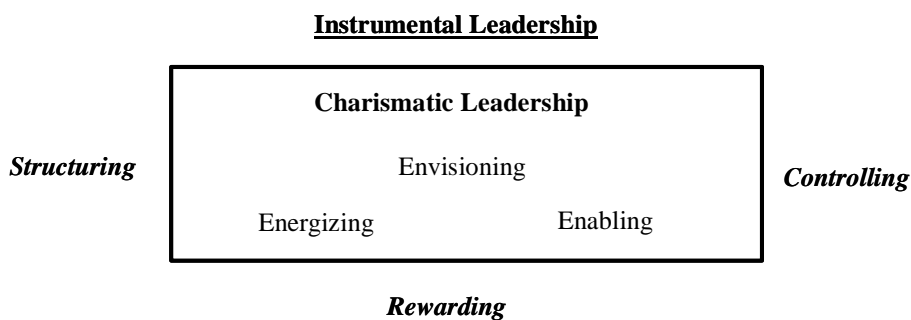
Instrumental Leadership

Structuring	**Charismatic Leadership** Envisioning Energizing Enabling

Controlling

Rewarding

Figure 3: Instrumental leadership adapted from Nadler & Tushman (2004)

This section has introduced the literature on innovation and models of organisational change and attempted to link these two important ideas running through our study. As the "Principle of Theory", dicsuused further in section 6.2, is an important factor in the evaluation of action research we will now spend some time presenting theoretical perspectives from an important paper on the topic.

3 Theoretical perspectives

We will now discuss Carol Slappendel's (1996) classification of the innovation literature in terms of three theoretical perspectives based on the antecedent work of Pierce and Delbecq (1977). These three theoretical approaches: the individualist perspective, the structuralist perspective and the interactive process perspective are presented in the sequence that reflects their historical development. She argued that the increasing growth in innovation publications necessitates that both researchers and students "establish mental models of the domain". The first category in her cognitive map is that of the individualist perspective which is characterized by the basic assumption that individuals cause innovation. Researchers holding this view propose that certain individuals have personal qualities or "traits" which "predispose them to innovative behavior" and that they make rational decisions based on the economic concept of "utility".

The second category; that of the structuralist perspective, proposes that innovation is determined by the structural characteristics of the organization. The proponents are from a number of different theoretical schools which according to Astley and Van de Ven (1983) "share a common deterministic orientation by which organizational behaviour is seen to be shaped by a series of impersonal mechanisms that act as external constraints on actors". The shift to this perspective coincided, according to Slappendel, with the increased promotion of "positivist epistemology in business research" and the availability of increasing computing power for "quantitative data analysis". However the main criticism of the approach is the organizational features such as technology and strategy, tend to be "reified" and treated as objective realities per se.

The development of the third approach: the interactive process perspective resulted from a reaction by scholars to the linear "stage-to-stage" notion of the innovation process and from calls that researchers view innovation as a dynamic process in a continuously changing environment. This evolution in thinking requires that any attempt at the generation of theory should address "the complex, and paradoxical relationship, between action and structure" over time. It also needs to endeavor reconciling both individual and structuralist consideration by analyzing their interconnection. One study of particular interest to our work is that by Walton (1987), who proposed a framework that emphasized the interaction of the factors which take into consideration individual, organizational and environmental features. Walton acknowledges his debt to the work of Pettigrew (1987) who argued that change should be analyzed in terms of the dynamic interplay between context, content, and process with the preferred research approach of "a historical method involving longitudinal case studies". Pettigrew's work, while primarily focusing on strategic change, has informed and influenced research on "strategic innovation". Slappendel's analysis of these studies illustrates the following important aspects of the third perspective: the rejection of the "rational economic model of decision making" with the associated attention to the political context; the emphasis on "understanding the dynamic nature of the innovation process"; the belief that innovations may be transformed by the process itself; and finally the methodological implications which resulted in the prevalence of longitudinal case studies with a focus on induction and in some situations the use of grounded theory. In the next section of the paper will follow the exhortation of Ciborra (2002) to return to the "origins of phenomenology" to provide a philosophical underpinning for our work.

4 Philosophical Underpinning

This section will address the action-theoretic debate by locating the philosophical underpinnings of this paper in the phenomenological movement initiated by Edmund Husserl and in particular within the "distinctive and thoroughly dialogical approach" developed by Hans-Georg Gadamer (Malpas, 2005).

4.1 The Phenomenology of Edmund Husserl

Edmund Husserl, the founding father of Phenomenology, is regarded as having instigated one of the most important philosophical movements of the twentieth century (Grossmann, 2005). The system has had an immense influence in Europe in areas spanning psychology, law, values, aesthetics and religion (Inwood, 2005d). He considered that philosophy should be carried out as a rigorous science using the structured methodology of reason and his vision was that the phenomenological approach (of bracketing the natural world and a reduction to pure consciousness) could overcome and synthesise the radical disagreements of contemporary philosophy. Husserl's original studies were in the area of mathematics and his most influential teacher was the philosopher Franz Brentano. His philosophy underwent a transition from his earlier studies on the "phenomenology of mathematical and logical concepts" to the "transcendental idealism" developed in his later major work "Ideas: General Introduction to Pure Phenomenology" (Elveton, 1970). Lauer (1965) argues that with the passage of time a precise definition of "phenomenology" became more difficult but proposed that the term could be traced back to a "distinction made by Kant between phenomenon or appearance of reality in consciousness, and the noumenon, or being of reality itself". However, he points out that Husserl rejected what he perceived as the "dualism" of Kant. Lauer continues to explain the phenomenology of Husserl as both a method and a philosophy. Method in so far as it provides the steps that must be followed "to arrive at the pure phenomenon, wherein is revealed the very essence not only of appearances but also of that which appears". In the realm of philosophy "it claims to give necessary, essential knowledge of that which is". Thus phenomenology advocates a "return to things because a "thing" is the direct object of consciousness in its purified form". This approach was in opposition to "illusions, verbalisms or mental constructions" implied by many contemporary movements. We will now proceed to examine the work of a significant figure in the development of phenomenology Hans-Georg Gadamer mainly derived from studies by Moran (2000), Malpas (2005) and Inwood (2005a, , 2005c, , 2005b)

4.2 The Philosophical Hermeneutics of Hans-Georg Gadamer

Malpas (2005) has described Hans-Georg Gadamer as the decisive figure in the development of twentieth century hermeneutics and indeed his long life spanned the whole of this period from his birth in 1900 to his death in 2002. The young Gadamer rebelled against the "ahistorical neo-Kantian tradition", then dominating Germany philosophy, and began the main theme of his life work: the synthesis of the phenomenological approaches of Husserl and Heidegger with the hermeneutical studies of Dilthey. Hermeneutics is the traditional name for the "art of interpretation" which developed from biblical exegesis in ancient schools such as Alexandria and over time, gradually began to be formalised as a set of principles. It became very important in the Protestant tradition after the reformation driven by the debate on how to accurately interpret the Bible. On a more Catholic note, St. Augustine's De Doctrina Christiana (On Christian Doctrine) is regarded as one of the foundational texts of

hermeneutical studies and had considerable influence on Heidegger's work during his Marburg years (Moran, 2000). Inwood (2005c) has divided the development of modern hermeneutics into three phases associated with the works of: Friedrich Schleiermacher, his biographer Wilhelm Dilthey and Martin Heidegger. An important facet of Gadamer's work was his immersion in the Greek tradition and in particular the program proposed by Socrates, Plato and Aristotle of pursing philosophy through dialogue and engagement with the practical. Indeed Tredennick (1969) points out that Socrates insisted that he was not a teacher but a sort of intellectual mid-wife who helped "others to bring their thoughts to birth". Understanding understanding was a major theme running through Gadamer's work and he contrasted the "phenomenon of understanding (Verstehen)" with "the explanation (Erklären) characteristic of the natural sciences"(Inwood, 2005b). Consequently Gadamer saw philosophy as a "conversation leading to mutual understanding" with the purpose of manifesting the matters themselves - which is resonant of the phenomenological program to "return to the things themselves". Moran (2000) argues that this dialogical character results in Gadamer interpreting the rather vague notion of matters themselves as the "events which occur 'between' people and their tradition –the common understandings which emerge in a dialogue and which go beyond the intentions of the speakers". Importantly according to Moran, Gadamer- following Heidegger - emphasised an "essentially anti-subjectivist view of understanding" that requires an openness to the other that is captured in the concept of dialogue. We will now turn one of the main ALOIS themes, that of language, and examine its major place in the philosophy of Gadamer.

4.3 Primacy of Language in Gadamer's philosophy

Paul Ricoeur described Gadamer's vision of the philosophical dialogue as a hermeneutics of trust rather than suspicion; thus rejecting the Nietzchean standpoint that "all understanding is really an attempt at mastery and will-to-power". He frequently said that the "dialectic has to be retrieved in hermeneutics" adhering to the Platonic understanding of dialectic as "the art of leading a conversation" in philosophical discourse. Gadamer's model of understanding as conversation has been described by Malpas (2005) as the "linguisticality of understanding" guided by his "basic idea that language is a medium where I and the world meet, or rather, manifest their original belonging together". Again this view was heavily influenced by the ancient Greeks as outlined in the following extract from his major later work Truth and Method -cited in Moran (2000 p. 270):

> That human experience of the world is linguistic in nature was the thread underlying Greek
> metaphysics in its thinking about being since "Plato's flight into the logoi".

As a result, he believed that an important focus for his work was to provide a "proper phenomenological description of the essential human activity of understanding as ensouled in language". Moran however warns that his infamous statement in Truth and Method "that which can be understood is language" (*sic*) could be interpreted as drifting into the dodgy area of "linguistic idealism". Another associated theme of Gadamer was that speech, language, interpretation and understanding is embedded in our historical context and subjected to our prejudices (or pre-judgements). However he proceeds to convert the normal negative view of prejudice into a positive conception which both Moran and Malpas term as the rehabilitation of prejudice. Consequently the uncovering of our normally concealed prejudices through dialogue opens us up to new viewpoints, understandings and indeed questions. Gadamer walked the talk engaging in debates with contemporary philosophers such as Habermas, Derrida and Ricoeur together with other public discussions on topics such as understanding between cultures and religions; and the role of science and technology in the modern world.

Gadamer has been subjected to criticism by Jürgen Habermas in the following areas: firstly his excessively unconditional acceptance of tradition which is prey to the adherence of its distorting aspects and secondly to Gadamer's conviction that "mutual agreement and understanding" can be equated with knowledge. Now, in this tradition of engagement with the practical, we will proceed to describe the context of our study and the research approach.

5   Case Description

The case study was initially based in APC Ireland, a subsidiary of the American Power Conversion (APC) Corporation. The Corporation entered a major period of transition in the first quarter of 2007 with completion of its acquisition by Schneider Electric and the formation of a new subsidiary called APC-MGE. As the initial part of this study was developed before the acquisition, this section will focus on providing a background to the APC context in which the work emerged. APC designs, manufactures and markets back-up products and services that protect hardware and data from power disturbances. The explosive growth of the Internet has resulted in the company broadening its product offerings from uninterruptible power supplies (UPS) to the high-end InfraStruXureTM architecture in order to meet the critical availability requirements of internet service providers (ISP) and data-centres. This modular design integrates power, cooling, rack, management and services, which allows customers to select standardised modular components using a web-based configuration tool. The Corporation reported sales of $2 billion in 2005, globally employs approximately seven thousand people and is a Fortune 1000 company. However, recent financial reports have stressed that the company needs to implement significant improvements in manufacturing and the supply chain (Results APCC 2006). According to these reports, the company must work to develop a "lean, customer-centric, ambidextrous organisation" in order to reach "optimal efficiencies in our processes". APC has two locations in the West of Ireland that serve the European, Middle East and Africa (EMEA) region. The Manufacturing Operations site, based in Castlebar, employs approximately 100 people while a number of functions including sales, information technology, business support and research and development (R&D) are situated in Galway with a workforce of approximately 300. Responding to the supply chain challenge, a Lean Transformation project was set-up in the Castlebar campus in February 2006 with a cross-functional team of twelve members drawn from Management, Engineering, Manufacturing, Materials Planning, Quality, and Logistics functions. The primary management information system employed by APC is Lotus Notes, a collaborative software system that manages its knowledge flows. It provides a tightly controlled environment for asynchronous group work; where collaborators can have different or independent work patterns. The strength of the MIS function in APC was viewed as an important advantage by Schneider in their acquisition analysis and APC's "intimacy with information technology" was identified as central to the creation of synergies with Schneider's power solutions subsidiary MGE.

6   Research Approach

The conclusions by Benbasat & Zmud (1999) concerning the lack of relevance in IS research was, to put it mildly, a criticism of the discipline. Consequently the initial approach to the case study was closely related to the following recommendation in their paper:
IS researchers should look to practice to identify research topics and look to the IS literature only after a commitment has been made to a specific topic.

Furthermore, Mårtensson & Lee (2004) have proposed that dialogical action research (which we will discuss below) can help "resolve the rigor-relevance dilemma". To this end we propose to test this proposition by addressing the following research question in this paper.

- RQ: Can dialogical action research provide the framework to assist the implementation of innovation as a process of organisational change?

6.1 Dialogical Action Research

Action Research (AR) originated from the work of Kurt Lewin during the 1940s and has been summarised as an approach that "combines theory and practice (and researchers and practitioners) through change and reflection in an immediate problematic situation within a mutually acceptable ethical framework" (Avison et al., 1999). Its application has not been without controversy particularly in debates with positivist science on the justification and generation of knowledge. These arguments were addressed by Susman & Evered (1978) in their influential description of AR as consisting of a cyclical process involving five phases. The focus of AR has been to address real-life problems through intervention together with the research objective of making a contribution to knowledge. In the realm of information systems (IS) research, Avison et al. (1999) argued that it took until ICIS 1998 for the community to agree that qualitative approaches, such as action research (AR), were finally gaining acceptance and proposed that "to make academic research relevant, researchers should try out their theories with practitioners in real situations and real organizations". One persistent bone of contention has been the "paucity of methodological guidance" for conducting and evaluating AR studies which resulted in a number of principles being proposed by Davison et al. (2004). Coghlan and Brannick (2005) emphasise the importance of the social and academic context in which action research is carried out and we have endeavoured to provide the contextual situation of the case study in section 5. Recently, Mårtensson & Lee (2004) have suggested and described a new form of action research called dialogical AR. Here is a brief description of their approach.

> In dialogical action research, the scientific researcher does not "speak science" or otherwise attempt to teach scientific theory to the real-world practitioner, but instead attempts to speak the language of the practitioner and accepts him as the expert on his organization and its problems.

In connection with our discussion of a philosophical foundation for dialogical AR in section 4, it is interesting to note that Susman & Evered (1978 p.594) argue that Phenomenology and Hermeneutics both provide viewpoints that legitimate action research.

6.2 Research Design

The research design followed the advice of Benbasat & Zmud that firstly there was a need to spend time in the organization, observing and listening, in order to get a feel for the situation. Data collection methods during this phase involved: maintaining a log book, reviewing documents and information systems, records, interviews, observations (direct and participant), artefacts and surveys in order to develop a database and body of evidence (Gillham 2000; Yin 1994). A total of 29 unstructured or open interviews were undertaken that involved approximately 60 hours of interview time and 24 days spent in the company sites. The interviews were conducted across a wide area of the organization that included: Senior Managers with global, EMEA, and site responsibilities, Middle-Managers, Team Leaders, Engineers and a number of people in general planning roles. The main contact point during the diagnosis phase was the Plant Manager of the Castlebar location which involved approximately eleven direct meetings with an estimated seventeen hours of interaction. He

instigated an "Innovation Management and Organisational Change" through 2007 with two main objectives:

- Establish a culture/climate of innovation in APC-MGE Castlebar

- Capture, Manage and Diffuse the Innovations across the wider APC-MGE/Schneider Corporation

There was agreement in January 2007 to move forward using dialogical Action Research with meetings every two weeks in Castlebar. The meetings during this phase resulted in over 20 hours of recorded interactions translating into almost 60,000 words of transcripts. In their paper Mårtensson & Lee propose that "reflective dialogues outside the organisation can help the manager to reflect on, learn from, and remedy managerial problems in the organization". In particular, the discipline of having to take regular timeout in a "time-pressured" manufacturing environment was a major incentive for the Plant Manager to agree to this approach. However the realities of the situation have resulted in a further adaptation of Mårtensson & Lee's methodology: the research "timeout" consists of finding a quiet place in the building and away from the office. The Plant Manager also considered the framework advantageous since it allowed him to retain control and responsibility for all decisions, implementations and communications. However there are a number of practical risks to this type of longitudinal research in a dynamic changing corporate environment, such as the realities of reorganisations and relocations that are not pointed by Mårtensson & Lee. Furthermore, in order to address the subject of rigour we have adopted the five principles proposed by Davison et al. (2004) to evaluate the research namely: the Principle of the Researcher–Client Agreement (RPA), the Principle of the Cyclical Process Model (CPM), the Principle of Theory and the Principle of Learning through Reflection.

7 Findings and Discussion

We will now examine the findings from the dialogical AR study based in the APC-MGE subsidiary using the Nadler & Tushman (2004) organisational change models introduced in section 2 and Slappendel's theoretical perspectives outlined in section 3.

7.1 Type of Organisational Change: *Adaptation*

On the first examination of the case study the evidence suggests that the organisation is undergoing a process of adaptation since the initial "Lean" project was undertaken reactively in response to the APC corporate communications that there was the need for improvement in process innovation (delivery of products and services) and paradigm innovation (organisational models). Subsequent to the acquisition by Schneider Electric, the Castlebar subsidiary quickly embraced the principles of the Schneider Production System (SPS) which is closely related to the Lean approach of the Toyota Production System (TPS). This involved visiting a flagship plant in France that uses SPS and networking with some of the main Corporate leaders and implementers of the program. An example of this was the running of a major Kaizen event guided by Schneider's experts in the area that was a first for any of the APC-MGE subsidiaries. Kaizen is a process improvement approach that is integral to Lean Thinking and it is interesting for this study that Tidd et al. propose the practice of kaizen as a method of continuous incremental innovation over a long period. A major process innovation (using the definition of Zaltman et al. referred to in section 2) was introduced to the plant based on the engagement with SPS; namely Short Interval Management (SIM). The method is being implemented in APC-MGE Castlebar both as a communications instrument and as a tool to help with the running of a production line. SIM is used to communicate issues from the

line up through the organisational support structure so that they can be prioritised and addressed. It has been found to be particularly useful for communication of potential health and safety issues, customer feedback issues and quality issues to everybody associated with a particular production cell. It is also used to track and communicate progress against the build plan. Key to the success of SIM is "short interval" where progress is tracked regularly. Large tasks get broken down into smaller steps against which progress is reported during twice daily SIM meetings of the production teams which are restricted to 10 minutes each. These meetings are run by the cell supervisor (or designate). At these meetings, the SIM boards which graphically display all the current health and safety, customer feedback, quality and build plan information are reviewed. Finally any potential barriers to achieving the build plan are brought up, which can be escalated to the support staff where ideally these issues should also have a suggested fix for the issue. The supervisor is responsible for taking a photo of any health and safety issues highlighted at the SIM meeting or during the day and posting on the health and safety section of the SIM board using the associated template. The support team for a cell also hold a daily SIM meeting which should take no longer than 30 minutes. This meeting is run by the production manager and members of this team include the CIL, manufacturing engineer, quality engineer and material specialist. The SIM process has become the major enabler of incremental innovation and change, associated with adaptation in the subsidiary.

The plant manger had this to say about the SIM implementation:

> The best way to get good ideas is to get lots of ideas. In terms of our organisational change, the SIM process has put a mechanism in place that allows people to get their ideas implemented. While the majority might be small and incremental – bigger ideas can emerge. For example, the SIM process threw up a potential problem with our health & safety process – it was too dependant on one person. The result was that we implemented an organisational change – and the external auditors were so impressed by the SIM process contribution to H&S that we won a national award. People are inherently intelligent but you need a mechanism to allow people to use their intelligence. The SIM process now facilitates people using their natural creativity and make suggestions that will be implemented. We didn't have this before and also we are keeping a database of the suggestions.

7.2   Another View of the Organisational Change: *Re-orientation*

While from a day-to day perspective, the incremental and reactive nature of the process of organisational change is most obvious, the dialogical AR project consists of both strategic and anticipatory aspects and hence fits the Nadler & Tushman taxonomy as being a re-orientation. The vision of the plant manager is that Castlebar is transformed from being "a manufacturing subsidiary" that produces a certain product line to an "innovative subsidiary" that can adapt to changing business process requirements and hence to being a sustainable location that can accommodate the exigencies of a continually evolving corporate product portfolio and environment. When asked what motivated him to undertake the organisational change process to implement an innovation culture he said:

> I saw it as a means to engage people and get them excited about something, start using their minds at work and overall making the site a better place to work in.

This re-orientation includes the criteria outlined by Nadler & Tushman of a long term perspective that encompasses: strategic change; building networks both within the corporate organisation and externally with academic and other sectors; and most importantly to create an environment that allows and encourages every person to be innovative and effective. However, as Nadler & Tushman point out re-orientations are risky and the future of the subsidiary within a re-aligning corporation and the increasing move to lower-cost locations remains to be seen. One motivating factor from the engagement with other Schneider

locations in France has been the realisation that sustainable manufacturing is still a reality when regular productivity improvements driven by such processes as SIM are demonstrated. For example the "Lean Transformation" project, when tracked, showed a dramatic productivity improvement in efficiency; increasing from 50% to 80%.

7.3   Leadership Approach

Now we will examine the leadership approach in terms of Nadler & Tushman's concept of instrumental leadership illustrated in figure 3 as consisting of three dominant behaviours: structuring, controlling and rewarding. In the case of structuring, there has been a concerted effort to building and empowering teams as evidence by the "Lean Transformation Team" which received corporate recognition. The manufacturing environment and the emphasis on measurement and key performance indicators (KPI) in the SPS and the SIM process in particular, naturally support the controlling attribute. Furthermore, within the limited budget constraints there has been an attempt to provide some rewards to employees and teams with the SIM process providing a quick feedback loop to ensure corrective actions do happen and responsibilities and commitments are adhered to. However the changing environment and the concerns about the future are real issues. The plant manager commented:

> That creates a problem for what we are doing here because in order for people to be creative and innovative your morale needs to be high. If the morale is going to be low, people are not going to come in and be creative. They will be more concerned about their jobs so you need a secure environment (for innovation).

Furthermore, progress on some areas of the 2007 project had been slow due to a number of factors such as the design and implementation of an information system to support innovation.

7.4   The Theoretical Perspectives

We will now briefly examine the study using Slappendel's taxonomy of innovation perspectives.

Individualist: One of the basic tenets of this perspective is that individuals such as champions or leaders cause innovation. The significant individual here was the leader who took over the plant at a crucial stage and began a renewal program starting with "Lean"; a process innovation new "to the unit of adoption". However there was little engagement and encouragement of innovation among other individuals in the subsidiary. This has begun to change with the adaptation and re-orientation project being undertaken.

Structuralist: The structural characteristics of the supply chain and in particular the mechanistic manufacturing organisation did not foster innovation. It had been solely associated with the product development divisions. One of the long term aims of the "Innovation and Organisational Change Project" is to put structures in place that support an innovative culture that includes everyone.

Interactive Process: At the beginning of the project there was little evidence of interaction between individuals and the organisational structures. However, now due to a number of "shocks" (Slappendel, 1996) such as the corporate call for a supply chain transformation and the acquisition by Schneider, there is now evidence that individuals are interacting with the structures -through the implementation of the SIM process- which is independent of interventions by the Leader.

7.5 Implications for Practice, Research and Limitations of the Study

While there have been regular calls for more effective academic and practitioner collaboration, evidence suggests that this is still largely unfulfilled. The structure of this research had a very significant practitioner commitment that even involved joint presentations of the work to academics. Furthermore, the "Principle of Learning through Reflection" has been used throughout the study on the subject matter being investigated and importantly, the research process itself. Such a dual focus, we believe can assist other practitioners: both from the context and "commonalities" emerging from the study; and from the voice of a practitioner on how research can contribute a dynamic real world situation. The approach is also consistent with Susman and Evered (1978) argument that action research – and in this case dialogical AR – "develops the capacity of members of the organization to solve their own problems".

The case study provides empirical evidence of utilizing a new form of action research recently proposed to the IS community by Mårtensson & Lee (2004). Dialogical AR is a novel and relatively untested method and this work seeks to investigate the approach. The use of the Principles of Canonical Action Research we believe, also enhances the methodology especially in the area of academic rigour. Furthermore we have followed Ciborra's call to return to the "origins of phenomenology" and consequently argue that the philosophical hermeneutics of Hans-Georg Gadamer can provide a solid underpinning to dialogical AR. This is distinct from the approach of Mårtensson & Lee who based their work in the more recent phenomenology of Schutz (1962).

The study is limited in that is derived mainly from the early stages of the ongoing work; resulting in more emphasis on the development of the theoretical framework and a curtailed presentation and analysis of the dialogues. Future work is required to carry out a more detailed analysis of the research interactions and interpretation of the findings.

8 Conclusions

This paper has presented an analysis of the findings from a study of innovation and organisational change in the APC-MGE subsidiary of the Schneider Corporation located in the West of Ireland. The aim of the study was to accomplish the dual mandate of action research: action by addressing a real-life problem through intervention together with the research objective of making a contribution to knowledge. The case study was carried out using the approach of dialogical action research, a novel methodology recently introduced in the IS literature. The paper also proposed a strong philosophical underpinning for dialogical AR in the phenomenology of Hans-Georg Gadamer together with enhancing rigour by applying the Principles of Canonical Action Research. The "Principle of Theory" was adhered to by examining the case using Slappendel's innovation perspectives and using the organisational changes models of Nadler & Tushman. The work also aimed to contribute to the debate for increasing academic-practitioner engagement within a rigorous framework and provided suggestions for further development of the dialogical AR approach.

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