Author: Caroline Bishop

Contact Address:

Nottingham Trent University Business School Business, Law and Social Sciences Room 721, Newton Building. Burton Street Nottingham NG1 4BU

Email: caroline.bishop@ntu.ac.uk

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Summary:

When the research subject spans literary fields or where the context has a profound impact on the validity of existing theories it can be advantageous to alternate between inductive and deductive research methods in a cyclical fashion. This enables theorising using both the literature and empirical data and facilitates a quest to find appropriate theories within the plethora of literature from different domains, when seeking to explain previously unexplored ground between the bodies of knowledge. This paper reflects on a PhD students experiences during a study of the effects of trust on an individual's propensity to share knowledge on an SME collaborative project, the challenges experienced and the cyclical methods used to overcome these. This cyclical research process is linked to experiential learning and action research and more abstract ways of visualizing the complex labyrinth of research on the boundaries of bodies of literature are explored.

Key Words: trust, knowledge sharing, networks, collaboration, experiential learning

Introduction:

Different academic communities share different methodological approaches and techniques; Klein (1996) suggests that these differences are not restricted to the traditional disciplines but are also present in sub-disciplines and individual fields of research/literature. When the research subject spans literary fields there is a need to draw on research which straddles the boundaries of different bodies of knowledge adding to both the quantity of literature to be reviewed and the diversity of methodological approaches and techniques within them. This is reflected in the researchers experience of researching on the boundaries between the trust, knowledge and collaborative networks literature.

When evaluating Newell and Swan's (2000) typology of trust and their model which compares the relationship between competence and companion trust in low and high commitment situations, a discrepancy was exposed between the data collected and the model. A cyclical approach was then taken, alternating between deductive and inductive methods, theorising using both the literature and empirical data collected, whilst seeking to explain previously unexplored ground between the bodies of knowledge.

Reflecting on the process similarities are identified between this cyclical approach and Dewey's model of experiential learning (Kolb, 1984), in figure 1. Dewey suggests that the starting point for experiential learning is an 'Impulse', which can be likened to the initial research question or hypothesis; followed by an 'Observation' phase which could include gathering empirical data; then 'Knowledge' of what has happened in the past is sought, perhaps from the literature; and finally a 'Judgment' is made based on both observation and knowledge, providing the answer to the research question(s) or posing new hypotheses.

This paper reflects on a PhD students experiences during a study of the effects of trust on an individual's propensity to share knowledge on an SME collaborative project, the challenges experienced and the cyclical methods used to overcome these. This cyclical research process is linked to experiential learning and action research and more abstract ways of visualizing the complex labyrinth of research on the boundaries of bodies of literature are explored.

Methodology

The proposed research was a longitudinal inductive study using qualitative methods including interviews and observations. Initially there was no intention to follow a cyclical approach but as a result of the unexpected discrepancy between the empirical data and the existing literature a quest began to understand why this was the case.

The revised methodology then followed a number of iterations of deductive and inductive loops which have many similarities to the action research spiral (Saunders et al. (2007) and Huang and Martin-Taylor (forthcoming), in which a number of cycles of diagnosing/determining next steps, action planning, action taking, evaluating and learning take place, see figure 2. Instead of action research cycles each iteration alternates from deductive methods, where an existing theory within the literature is tested against the empirical data, to inductive theorising based on the data collected, shown in figure 3.

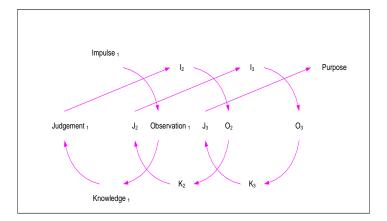


Figure 1 Dewey's model of experiential learning Kolb (1984, p23)

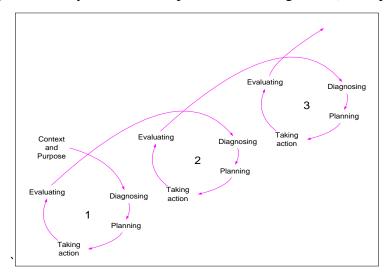


Figure 2 The action research spiral Saunders et al (2007,p.141)

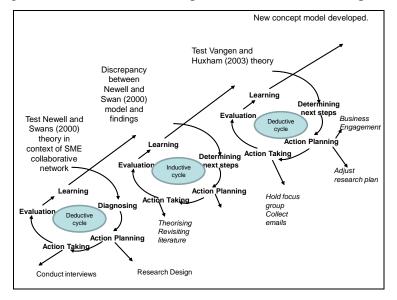
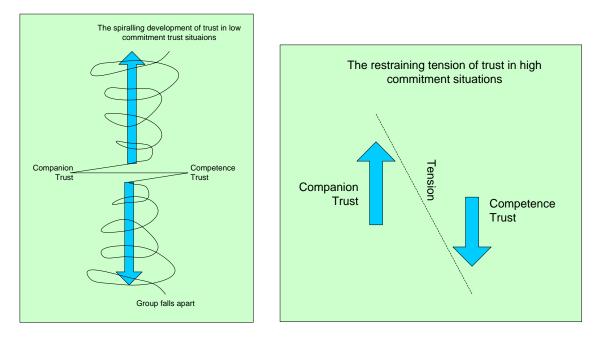


Figure 3. Deductive/inductive research spiral (adapted from action research spiral Saunders et al., (2007) and Huang and Martin-Taylor, (forthcoming)

The research process:

Research initially focused on Newell and Swan (2000), an ethnographic study of a university research project spanning universities and departments over a number of months, in which four propositions are made; the first two form the basis of their model, shown in figure 4. and informed this research. The first part of their model depicts a spiral in which companion and commitment trust reinforce each other in the same direction therefore as companion trust builds so does competence trusts and vice versa. Conversely if companion trust is lost then so too will be competence trust; illustrating the reason why trust can be build and lost so quickly. The second part of the model shows how commitment trust, in the form of contracts, can act as a restraining force on this spiral limiting the potential for building trust but also avoiding the downward spiral if trust is dinted. To test these models within the context of a collaborative SME network rather than a University research project and to explore the links between trust and knowledge sharing the following questions were addressed in the first deductive cycle; Does knowledge sharing increase as trust increases and vice versa? Can knowledge sharing be added to Newell and Swan's model? Do trust and knowledge sharing follow the same spiral pattern? Does contractual trust restrain the development and loss of trust?



Proposition 1: In low commitment trust situations, competence and companion trust are reciprocally dependant, one reinforcing the other in the same direction.

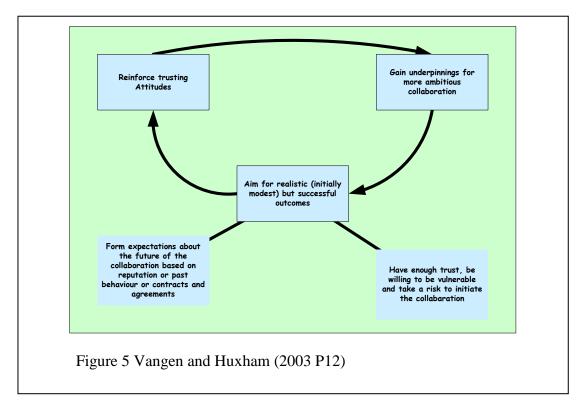
Proposition 2:In a high commitment trust situation, competence and companion trust are held in mutual tension such that, as one decreases, the other increases to compensate.

Figure 4.Newell and Swan (2000 p1318)

To answer these questions data was analysed from interviews with managing directors, sales managers, project managers and engineers from three key businesses within the network

collaborating on a project to upgrade a legacy electricity generating plant. The preliminary results suggested that elements of Newell and Swan's model did not hold true within this context. In particular contractual trust did not have a restraining effect on the spiralling up or down of companion and competence trust; trust could be lost or gained quickly regardless of a contract being in place.

This lead to an inductive phase, where possible reasons for the different effects which contractual trust appeared to have within this context were sought. Alternative theories explored included SMEs tendency to be wary of formal contracts and avoid legal disputes due to the prohibitive costs (Hills 2008) and that risks become personal with owner/managers. Hills (2008) identifies a link between contractual trust and risk within SMEs suggesting that contracts are used where the SME feels unable to accept the risks. These links to risk were supported in a discussion with Siv Vangen (Vangen 2010), leading to the identification of Vangen and Huxham (2003) as providing explanation for the discrepancies in Newel and Swan's (2000) model. Vangen and Huxham (2003) is one of a number of papers resulting from a program of research, spanning from the late 1980's to present, in which the researchers intervened in a large number of inter-organizational collaborations in public, private and voluntary organisations. Vangen and Huxham (2003) focuses on trust building (and how to facilitate trust building) in their trust building loop theory, figure 5, and discuss how risk, power and control affect the building of trust. Trust building is described as a cyclical process with clear links made between trust and risk and it is suggested that sufficient trust is required to overcome any risks; therefore the level of trust needed will depend on the level of risk present.



The research then moved into the second deductive cycle in which Vangen and Huxham's (2003) theory was tested using the empirical data gathered from the SME collaborative project context. It was found that the data already collected supported Vangen and Huxham's (2003) assertions that trust is required to overcome the risks, control is increased if trust is reduced and vice versa and that power imbalances are an obstacle to trust building. This prompted another round of theorising (inductive cycle) drawing together the original research questions, Newell and Swan's (2000) model, the theories and questions from Hills (2008) and Vangen and Huxham's trust building loop theory and resulted in a number of additional questions to be answered in order to properly test their theory in the context of this research. These included; how had trust and knowledge sharing changed throughout the project? What part did risk and power play within this? Further data collection followed in the form of a focus group and the collection of emails from the project being studied in a final deductive loop.

Methodological discussion - finding your Minotaur

Having reflected on this cyclical process of inductive and deductive methods a key factor in selecting this approach was the quest to find appropriate theories within the plethora of literature in order to explain the empirical data. O'Doherty (2007, 837) discusses what he sees as a crisis in theory and organization which he believes threatens to generate 'a cacophony of voices – a 'dada' of incoherence and contradictions'. This epitomises the experience of conducting research on the boundary of fields of knowledge; the feeling that there are so many different paths you could take and so many different theories you could use that clarity and direction are lost. The action research spiral (Saunders et al (2007) and Dewey's model of experiential learning (Kolb, 1984) give two possible theoretical perspectives on the cyclical methods employed to facilitate exploration and learning on this research project; but is it appropriate to produce another theoretical model to explain the process devised to make sense of the plethora of theoretical models and the discrepancies identified between theory and empirical data.

An alternative view might be to visualise the problem in a more abstract manner, to seek new means of understanding the issues and thereby find a way through the maze of pathways and the piles of literature and theories which cloud the researchers mind. Looking to Greek mythology, Burrell (2001) suggests that the word thesis has the same roots as Theseus; The character from the Greek legend who was sent into the labyrinth to sleigh the Minotaur. On the way into the labyrinth he takes many wrong turns and dead ends in his search for the beast. Having laid a thread on the way in he is able to straighten it out as he returns, now knowing which path to take. The search for the beast can be likened to the search for answers to research questions (the truth), which will ultimately be written in a thesis or paper. In a quest to find answers you will travel many wrong paths and arrive at many dead ends but once the truth is found, and the beast sleighed, these can be straighten out when writing the final thesis.

When considering research at the boundaries of a number of fields of research this metaphor becomes more complex. On reflection it appears that there are portals in the maze, allowing the Minotaur to move from one location, or body of literature, to another as new links are discovered. Burrell (2001, p.27) suggests that sleighing the beast involves ratiocination

(reasoning, conscious deliberate inference, exact valid rational thought) but perhaps when dealing with multiple fields of study the Minotaur becomes too illusive as we search within and between the different bodies of literature. When discussing this metaphor Burrell (2001) suggests we should not seek to sleigh the beast but rather seek him out to further our understanding, this seems particularly pertinent when researching on the boundaries of fields of knowledge.

Conclusion

In conclusion, this paper has reflected on theoretical and metaphoric understanding of the difficulties experienced when researching on the boundaries of bodies of knowledge. From a theoretical perspective the cyclical process of deductive followed by inductive enquiry within a qualitative longitudinal study using both theorising and the empirical data led to a greater understanding of the theoretical concepts within different fields of literature and how the data collected in this context can add to knowledge. Theoretically it has been found that the different ways in which SMEs consider and manage both risk and formal contracts affects the way in which commitment trust needs to be viewed within this context. Some answers have therefore been found but far more questions have been raised. Metaphorically it is like finding a path through the labyrinth to sleigh the Minotaur when perhaps he did not exist or has always been one step ahead. In many ways researching on the boundaries of academic fields simply exaggerates the issues which exist within all research particularly the incoherence and contradictions caused by the plethora of literature and theories presented from so many different viewpoints. It has been suggested that perhaps research should be considered more of a journey of discovery rather than a quest and that we may never find the answers to all of our questions but should simply seek to continue learning.

Plans for development prior to discussion

As the thesis is written up reflection on the methods used will continue, the proposed deductive/inductive research spiral model and labyrinth metaphor will be reviewed and developed further.

References:

Burrell, G., (2001). Ephemera: Critical Dialogues on Organisation. Ephemera, 1(1) 11-29.

Hills, C.A., 2008. *Growth in small businesses: collaboration, cooperation and trust.* MBA Dissertation, Nottingham Trent University.

Huang, J. and Martin-Taylor, M., (forthcoming) Turnaround user acceptance towards HR self-service technology: an action research approach? International Journal of HRM.

Klein, J.T., 1996. Crossing boundaries: Knowledge, disciplines and interdiciplinarities. Virginia; The University Press of Virginia

Kolb, D., 1984. *Experiential learning: experience as a source of learning and development.* New Jersey: Prentice Hall P T R.

Newell, S. and Swan, J., 2000, Trust and inter-organisational networking. *Human Relations*, 53(10), 1287-1328.

O'Doherty, D.P., 2007. The Question of Theoretical Excess: Folly and Fall in theorizing Organisation. *Organization*, 14(6): 837-867

Saunders, Mark N.K., Thornhill, A. and Lewis, Philip., (2007) Research Methods for Business Students. Financial Times/ Prentice Hall; 4th edition.

Vangen, S., 2010. Conversation with Siv Vangen, British Academy of Management Inter-Organisational Relation Special interest Group meeting, Cranfield University, 25 May.

Vangen, S. and Huxham, C., 2003. Nurturing Collaborative Relations: Building Trust in Inter-organizational Collaboration. *The Journal of Applied Behavioural Science*, 39 (1), 5-31.