

Tacit knowledge: to what degree do older women understand,
value, and utilise their tacit knowledge in the workplace context?

Barbara May

A dissertation submitted to
Auckland University of Technology
in partial fulfilment of the requirements of the degree of
Master of Business (MBus)

2008

School of Management

Primary Supervisor: Dr Judith Pringle

CONTENTS

ACKNOWLEDGEMENTS	5
1. CHAPTER ONE: INTRODUCTION.....	6
1.1 Introduction.....	6
2. CHAPTER TWO: LITERATURE REVIEW	12
2.1 Knowledge Management	12
2.1.1 Commonly Proposed Methods of Knowledge Transfer	12
2.1.2 Knowledge Development.....	17
2.1.3 Tacit Knowledge.....	20
2.1.4 Older Employees.....	22
2.1.5 Influences on Knowledge Sharing in Practice	27
2.2 Context of Women’s Careers.....	35
2.2.1 Gender, Stereotypes and Generational Differences	36
2.2.2 Women in the New Zealand Context.....	39
2.3 Summary of Literature Review.....	41
3. CHAPTER THREE: METHODOLOGY	46
3.1 Introduction.....	46
3.2 Research Approach	46
3.3 Method	48
3.3.1 Sample.....	48
3.3.2 Interviews.....	49
3.4 Data Analysis	51
3.5 Summary of Methodology	53
4. CHAPTER FOUR: FINDINGS.....	55
4.1 Introduction.....	55
4.2 Knowledge Transfer.....	57
4.3 Positive and Negative Interactions.....	59
4.4 Awareness and Perceptions of Value.....	65
4.5 Age and Gender	69
4.6 Categories Emerging from Analysis.....	71
4.7 Summary	73
5. CHAPTER FIVE: DISCUSSION.....	76
5.1 Introduction.....	76
5.2 Methods of Knowledge Transfer and Capture.....	76
5.3 Awareness and Value Attributed to Tacit Knowledge	79
5.4 Utilisation of Tacit Knowledge.....	80
5.5 Summary	81
6. CHAPTER SIX: CONCLUSION	83
6.1 Conclusions and Recommendations	83
6.2 Contribution of the Research	85
Figure 1: Interactive Knowledge Development	19
Figure 2: Assumed Characteristics of Older Employees.....	23
Figure 3: Commonly Described Components of Knowledge.....	26
Figure 4: Typology.....	71
Appendix 1A and 1B: Background documents	
Appendix 2: Dissertation documents	

‘I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.’

Signed: _____

Barbara Kent

ABSTRACT

Tacit knowledge has been a subject of increasing research but has rarely been explored from the perspective of the individual. This has resulted in an imbalance within the management literature that has slowed down the progress of gaining an understanding about the nature of tacit knowledge and how it combines all knowledge. The purpose of this study is to add to contemporary management research with the intention to increase the understanding of tacit knowledge from the perspective of older women. Therefore it is important to identify factors that influence their perceptions on the degree of understanding and value they attribute to this intangible asset. Ten women from different workplaces were interviewed using open-ended questions. The interviews followed a discussion format to ensure the collection of rich data. The study concluded that older women prefer to participate in one-on-one knowledge sharing activities or within a reciprocal group environment. Each woman held varying degrees of awareness, understanding, and value towards their tacit knowledge. The outcome of this qualitative study has identified some critical information for managers, and consequently older women, for the development of knowledge in the workplace.

ACKNOWLEDGEMENTS

This dissertation has culminated from a life time of observation, consideration and unspoken questions that have remained with me to this day. I acknowledge the following people who have influenced this exploration on how older women understand the value of, and how they utilise their tacit knowledge.

- I thank my mother from who I learned the most by observing her actions and behaviour throughout many years of hard work without having the value of her knowledge and skills recognised.
- I acknowledge the women I have interacted within the age group this dissertation has consulted. I observed these women unselfishly supporting their family members, their work colleagues and their managers achieve goals without asking for recognition, and frequently being bypassed for promotion.
- In particular I would like to thank my primary supervisor, Professor Judith Pringle at the Auckland University of Technology (AUT). Judith is the woman who provided an opportunity to explore my underlying questions during a paper on diversity. She provided the encouragement for me to complete my Masters of Business with a focus on bringing more attention to older women in the workplace context. I also acknowledge Dr Jane Parker (AUT) who assisted me in clarifying the content of this dissertation.
- I acknowledge the resourceful and intelligent women who have participated in this study. They gave their time and shared their personal information that made this dissertation possible. I thank them for the trust they held in me to interpret their interviews with ethical care and to allow the publication of their commentary.

1. CHAPTER ONE: INTRODUCTION

1.1 Introduction

Tacit knowledge is a relatively new topic within research that has been the subject of increasing research but rarely explored from the perspective of the individual.

‘Definitions of ‘tacit’ knowledge remain contentious and are described within literature at varying degrees of rigour by different authors (Alonderiene, Pundziene, & Krisciunas, 2006; Bowditch & Buono, 2005; Collins, 2007; Eucker, 2007; Lizardo, 2007; McAdam, Mason, & McCory, 2007; Polanyi, 1959; Walsham, 2001). For the purposes of this study, tacit knowledge is defined as the deeply held personalised knowledge accumulated through life long learning experiences (Alonderiene, Pundziene, & Krisciunas, 2006). Tacit knowledge is the basis from which all knowledge is developed (Alonderiene, Pundziene, & Krisciunas, 2006; Polanyi, 1959, 1962; Polanyi & Prosch, 1975).

Knowledge is defined as being comprised at three levels of articulation: explicit (easily articulated); implicit (able to be articulated), and tacit (difficult or not able to be articulated) (Alonderiene, Pundziene, & Krisciunas, 2006; De Long, 2004).

Knowledge is accumulated through formal (education), informal (training sessions), and non-formal (human interaction) processes (Alonderiene, Pundziene, & Krisciunas, 2006). Up to 90% of knowledge is held tacitly (De Long, 2004) with 70-90% transferred through informal interaction (Alonderiene, Pundziene, & Krisciunas, 2006).

Tacit knowledge is an intangible and unmeasurable resource that often remains unrecognised and undervalued by the individual. Tacit knowledge remains an ambiguous elusive asset that is difficult to define (Stenmark, 2001). This problem has resulted in an emphasis within management literature on methods to capture knowledge. The management perspective has generated much literature that assumes tacit knowledge can be made explicit and is therefore quantifiable (Styhre, Indelgard, & Roth, 2001). This perspective has slowed down the progression of understanding of what tacit knowledge is and its location within all knowledge. It is therefore important to the purpose of this study to explore a broader perspective of how individuals value and utilise their tacit knowledge.

Management literature generally approaches knowledge management without attention to the importance of a lifetime of accumulated tacit knowledge that is held often without recognition by older women. This dissertation explores tacit knowledge from the perspective of women aged between 45-70 years of age and how that knowledge is valued and utilised by those women. Women of this age face additional barriers in the workplace such as disjointed career pathways (O'Neil & Bilimoria, 2005), stereotypical attitudes and age discrimination (Perry & Parlamis, 2006) and historical undervaluing of their knowledge in a masculine society (Brown, 1994). (Appendix 1a.)

Semi-structured interviews were undertaken with ten women from different workplaces using qualitative and subjective questions to ensure the collection of rich data (Bryman & Bell, 2003). The outcome of this qualitative study identified some critical information for managers who need to grow knowledge exchange practices to meet organisational strategies for growth. This study concludes that older women are aware of the value of their tacit knowledge to varying degrees that relate to their awareness of how they control the utilisation of that knowledge. The findings are significant for practicing managers. The women interviewed for this study expressed an increased understanding of their tacit knowledge and the value of that resource through informal conversation in a trusting environment. The more informal discussion that occurs, the more knowledge is shared.

The literature review highlights several important factors that relate to the question of this study. The management, capture and utilisation of knowledge is important to the ongoing success of a business for the purposes of appropriation (Magnier-Watanabe & Senoo, 2008; Osterloh & Frey, 2000; Smedlund, 2008). Much literature on knowledge management has investigated tacit knowledge from a management perspective, and as a codifiable and quantifiable component of knowledge that is collectively accumulated for the use of others. The literature review that follows describes numerous processes such as, for the purpose of this study, computer-based information communication technologies (ICTs), mentoring and communities of practice (COPs) that are proposed to capture and measure knowledge, and then make it available for transfer.

Popular modes of knowledge transfer methods have been proposed in literature as successful knowledge management practices such as ICTs. ICTs are generally repositories for data and fail to capture the human dimension of experience and know-how (Ardichvili, Page, & Wentling, 2003; Pyoria, 2007; Schneider, 2007). Additional solutions proposed by the literature for the capture of tacit knowledge are mentoring (Belenky, Clinchy, Goldberger, & Tarule, 1986) and communities of practice (COPs) (Crotty, 1998; Monge & Contractor, 2003; Pyoria, 2007; Schenkel & Teigland, 2008). An opposing theme was that mentoring and COPs can also be vulnerable to 'group think' conditions that negatively affect creativity and innovation (Bryman & Bell, 2003; De Long, 2004). Formal education and training programmes are rarely mentioned in the literature with even less attention is provided to one-on-one transfer between two people.

Outside of the management literature there is increasing amount of research that states tacit knowledge is intangible, elusive and unmeasurable (Polanyi, 1959, 1962; Polanyi & Prosch, 1975). Yet without tacit knowing, knowledge would not evolve. Followers of the Polanyi philosophy of tacit knowing draw together the facets of knowledge but have still failed to fulfil his view that tacit knowing is the glue that holds all knowledge together and makes sense of it (Nonaka & Nishiguchi, 2001; Nonaka, Toyama, & Konno, 2000). The recurring problem has been to identify the influences that directly impact on an individual's willingness to participate in positive knowledge sharing interactions (McAdam, Mason, & McCory, 2007). This is a problem for practicing managers who are commonly referenced as not having appropriate skills to manage relationships let alone knowledge (Pyoria, 2007; Slagter, 2007).

Common influences on an individual's willingness to participate in social exchange processes and the related behaviour have been identified as conditions that impact on the psychological contract (Rousseau, 2001; Schalk & Roe, 2007), social exchange (Blau, 1964; Ekeh, 1974; Kivetz & Tyler, 2007), and social comparison judgements (Miller & Karakowsky, 2005; Schienman, 2006). Consequential influences are the emotions and perceptions generated from either negative or positive interactions that result in varying levels of trust. Trust is related to feelings of safety in the workplace in relation to conflict, misrepresentation of shared knowledge, and confidence in the abilities and skills of managers (Acker, 2006; Bowditch & Buono, 2005; Holmes, 2006). If the manager was perceived as not able to resolve conflict situations, or actions are perceived as unfair,

negative situations can escalate into disruptive and dysfunctional workplace activities (Benson & Brown, 2007).

Negative social interaction is closely related to perceptions of power and status (Nonaka, Toyama, & Konno, 2000; Schienman, 2006). Those people who perceive they are a victim of conflict may also perceive themselves as having a lower position of power and status, and therefore of less value than others. Some research suggests that in contrast to a masculine social order, women should be able to interact in a positive manner in the workplace (English, 2005). However, experience and research suggest that not all women are self-confident nor respectful of each other in the workplace and participate equally in negative and positive interactions (O'Neil & Bilimoria, 2005). Historical masculine values undervalue women's knowledge leaving women with a multitude of 'hidden' barriers to restricting movement away from feminine stereotyped jobs or seeking promotion opportunities (Eucker, 2007; Leonard & Swap, 2005; McGregor, 2008).

The women of interest to this study were born between the 1940s and 1960s and within the New Zealand context. Since this era nearly 50 years of substantial social change for women have transpired (McGregor, 2005). Thus, the question that remains is, why are women still undervalued in the workplace (McGregor, 2008). It is commonly agreed within literature that the working population is ballooning with older workers who will outnumber younger workers within the next two decades (De Long, 2004; McGregor, 2005). In consideration of the lack of appreciation of older workers' accumulated knowledge (McGregor, 2005), the historical undervaluing of women's knowledge (Brown, 1994; Darlington & Mulvaney, 2002) and the additional barriers such as stereotypical attitudes (English, 2005; Henry, 2003) and age discrimination (Snape & Redman, 2003; Sveiby, 2007) it is important for managers to specifically tap into this resource to increase efficiencies. Women form the majority of low to mid level workers within the older cohort (Dwyer, 2008; McGregor, 2008). The importance of understanding how women perceived their tacit knowledge and how they make decisions whether or not to share that knowledge is critical to ongoing business success. The exploration of this topic will seek some answers as to how women understand, value and utilise their tacit knowledge in the workplace. The following questions have formed the basis of this research project.

1. Are women aware of the concept of tacit knowledge as the accumulation of their life long experiences?
2. What value do women attribute to their tacit knowledge?
3. When and how do women utilise their tacit knowledge in the workplace context?
4. What are the conditions that influence decisions women make on when, where or with whom they will share their tacit knowledge?

This researcher does not approach the question of this study from the perspective that there is a difference between men's and women's knowledge, nor that there is a difference in value between the two. The question has grown from a personal life-long observation of older women's actions and behaviour, and observing human resource management practices. Recruitment processes remain focussed on replacing 'lost' knowledge rather than attributing value to a current employee and retaining their knowledge (De Long, 2004). The loss of knowledge poses a critical threat relating to continuous growth of business and individual employees.

The purpose of this dissertation is to engage with a number of women and explore the degree of awareness they have relating to their tacit knowledge and if there is a relationship between that awareness and how they value and utilise their tacit knowledge in the workplace. Older women were selected as the sample because research supports career and life stages as being different for this cohort as apposed to younger women and men (O'Neil & Bilimoria, 2005; Sveiby, 2007). Women who volunteered to participate in the collection of primary data were living and working in Auckland and Hamilton, New Zealand. The close geographical proximity to the researcher (based in Auckland) was necessary for the completion of the study within the short time frame available for this study.

There is a gap in current literature that directly relates to the question of this study. Therefore Chapter 2 will present a review of literature that relates to influences on the transfer of tacit knowledge. Chapter 3 will outline the methodological influences and approach to data collection and analysis. Chapter 4 will present findings of the study and provide detailed responses from participants. The discussion in Chapter 5 will evaluate findings and offer an emergent typology and implications of the categories

that have defined that typology. In conclusion, Chapter 6 presents information for managers on the importance of developing socially friendly workplace environments, and for women themselves to develop activities that assist in the recognition and valuing of their tacit knowledge resource. The following chapters will present a review of research topics that relate to the question of this study to compile a holistic overview of tacit knowledge and influences affecting older women in the workplace.

2. CHAPTER TWO: LITERATURE REVIEW

2.1 Knowledge Management

Knowledge management is defined as ‘the tools, techniques, and strategies to retain, analyze, organize, improve, and share business expertise’ as a means of improving efficiency (Groff and Jones, 2003 cited in Slagter, 2007., p. 83). Contemporary research describes the importance of actively retaining and ‘managing’ knowledge in its various forms within the business context (Magnier-Watanabe & Senoo, 2008; Osterloh & Frey, 2000; Smedlund, 2008). The importance of knowledge management arises from the shift from an industrialised society to a knowledge dependent society, accompanied by a driving growth from tangible to intangible knowledge development (Prasad, 2005; Schenkel & Teigland, 2008). Knowledge is recognised as a form of capital, an asset that provides a real competitive advantage that is difficult for competitors to imitate (Andriessen, 2007).

The potential of losing knowledge is an important strategic problem (Foos, Schum, & Rothenberg, 2006) because a good deal of that knowledge is held as an unknown quantity in people’s minds that will never be codified or shared (Smith, 2001). Capturing knowledge is particularly important as employees age and leave the workforce with the result that firms could lose up to 90% of individually held unique tacit knowledge (De Long, 2004; Walsham, 2001). However, there is a lack of understanding of how to capture knowledge let alone manage it (De Long, 2004; Schneider, 2007; Smith, 2001).

Management strategies generally focus on introducing processes assuming that people will feel happy to contribute their knowledge to management systems. While these strategies all attract positive attributes, they equally attract negative consequences and are therefore not successful in achieving organisational goals. The following section will discuss three common methods of knowledge management that were outlined in the management literature.

2.1.1 Commonly Proposed Methods of Knowledge Transfer

There are three common methods implemented by organisations in an attempt to capture and utilise knowledge. These methods include:

- capital intensive computer based programmes known as information communication technologies;

- low cost one on one learning transactions frequently called mentoring programmes;
- the development of communities of practice that facilitate knowledge development.

Each of these three methods were considered within management literature as effective tools for the capture and retention of knowledge within business. On the other hand, other literature outside of the field of management contradicts the proposed positive attributes these methods embrace. The following sections describe the positive and negative impact of information communication technologies, mentoring, and communities of practice.

Information Communication Technologies (ICTs)

Information communication technologies (ICTs) are proposed to support the manipulation of management systems to identify tacit knowledge by identifying users' areas of interest within computer systems (Stenmark, 2001). Stenmark attempts to 'sell' the capture of individual's data seeking practices and linking it to their tacit knowledge. This concept was taken a step further by linking 'like-minded' people to establishing communities of practice. He proposes that tacit knowledge can therefore be captured by computer systems. On the other hand, Stenmark has ignored human decision making processes whether to participate, and is contradicted by other literature that states ICTs capture data only. It is important to this study to further define the problems of assuming data encompasses valuable tacit knowledge.

ICTs remain focussed on building database repositories of recording best practice (Von Krogh, Ichijo, & Nonaka, 2000). ICT repositories can be beneficial for capturing explicit knowledge but they lack human meaning (Schneider, 2007). While ICTs can quickly reproduce data to assist decision making processes, they also restrict face-to-face communication (Ardichvili, Page, & Wentling, 2003; Pyoria, 2007). As a result ICT systems treat knowledge as data (Walsham, 2001) and are not successful in connecting codified information to users' tacit sense making (Pyoria, 2007).

Some literature promotes ICTs as the definitive method of knowledge capture while other literature in the field express an over-emphasis of managers trying to control knowledge by capturing it within ICT systems rather than building an enabling

environment that supports the use of that knowledge more effectively (Fawcett, 2002) Pyoria (2007) followed a case study approach to his research. He argued that it is not technology, but people and a creative work environment that will build competitive sustainability. Pyoria supported his view with empirical literature, informal discussions, non-participant observation, and interviews of staff within five knowledge dependent firms (2007). The distinctly different knowledge based firms were a) a research and development unit at a global manufacturing enterprise; b) a telemarketing firm; c) a construction planning office; d) a modern wood processing factory; and, e) a small accounting firm based in one of the most prolific technological growth areas. Pyoria based his interview data on only a small portion of employees from each firm for example, (a) seven of 1000 employees, and (b) five of 100 employees). While primary data should have been drawn from a larger participation rate, he drew his conclusion through saturation of emerging themes. He brought together a broad source of data that reiterated the importance of providing an informal culture where people are considered more important than technology. ‘...the speed at which these applications [ICTs] are being introduced, coupled with knowledge workers’ lack of time and resources to internalize them, have resulted in a more or less chaotic situation’ (Syed, 1998, p.62 cited in Pyoria, 2007, p.26). Knowledge-intensive firms should always firstly value the employee before expensive systems are introduced. Preceding the introduction of ICT systems, employees were shown they were valued by offering mentoring partnerships within the firm.

Mentoring

Mentoring programmes are often implemented in an effort to stimulate the transfer of knowledge between people in a more meaningful manner. One-on-one mentoring programmes are effective in transferring knowledge between two people drawing on the deep knowledge base held by a senior experienced person to teach and guide another (Swap, Leonard, Shields, & Abrams, 2001). However, these authors found little evidence from their literature review of a positive relationship between mentoring and organisational performance.

A brief article (Keating, 2002) espouses mentoring as a frequently used informal method of support between people. Keating discusses mentoring programmes as beneficial to ‘boosting your self-esteem’ (2002 p.28) and that ‘women who are mentored also tend to

become mentors later on' (2002 p.28). Keating supports both informal and formal mentoring processes stating that up to 85% of workers have experienced informal support through encouraging phone calls, regular lunches, or modelling your own work on a referent's work. This positive view towards mentoring is idealistic and has been presented without empirical support. Similar support to mentoring is provided by other authors (Swap et al., 2001). This research provides an alternative view from that of Schenkel & Teigland (2008) as discussed above. Swap et al., (2001) found that people who have been mentored perform better and are promoted more rapidly than other people. The authors expand the concept of one-on-one mentoring to include a broader perspective of the underpinning philosophy of mentoring. They related mentoring to activities such as informal teaching, the help given between colleagues, and reverse mentoring (the learner teaching the teacher). Additionally, they acknowledged the importance of informal interaction between people as critical to the successful transfer of tacit knowledge. These interactions can be enhanced by informed managers who understand why and how people learn.

Reverse mentoring is addressed in another brief article (Greengard, 2002) in which the author suggests that younger people entering a business often have a higher level of, for example, information technology knowledge. Greengard expresses the need for the mentoring partnership to be more reciprocal where old knowledge is passed on to the younger colleague and in turn, new knowledge is passed upwards to the more senior person. This style of mentoring is closely related to the concept of peer mentoring processes.

Peer mentoring programmes are becoming more common where it is suggested that colleagues can share and discuss problems in a way that gives better meaning to the knowledge shared (Monge & Contractor, 2003). For example, nursing communities have been explored in relation to positive examples of peer mentoring groups and as social support networks in a comparative analysis between six hospitals by Albrecht and Ropp (1982) cited in Monge and Contractor (2003, pp.235-236). Social support networks are explained as a mechanism leading members to a better understanding of their problems and an improved mobilisation of resources. This view is supported by the characteristics of effective peer mentoring as explored in a brief article that discussed the shared responsibility of a nursing unit to collectively mentor new entrants (Pyoria, 2007). The social support method provides a holistic overview of the new entrant's learning

experiences and is particularly successful in the health environment where support in learning improves the service and welfare provided to patients.

Communities of Practice

The re-conceptualisation of mentoring to an environment where knowledge development is provided from multiple sources appears to be emerging under a revised context.

Communities of practice (COPs) are argued as the definitive mode for sharing knowledge with extensive resources being allocated for learning activities within this model (Schenkel & Teigland, 2008). Often a change in the structure of the organisation is required to rearrange communication and work practices. However, as Schenkel & Teigland (2008) found, COPs are sensitive to changes in perceived as normal communication channels. Incremental change is most effective particularly if accompanied with an informal culture where professional sub-cultures can form. The COP model is suggested as beneficial because individuals work together on specific knowledge activities irrespective of structural hierarchy (Pyoria, 2007).

Von Krogh et al., (2000) describe micro-communities of knowledge as comprising of small groups where members share what they know and their common values and goals. However, COPs are dependent on the quality of interaction between employees that is dependent on a bond of trust and mutual understanding (Bowditch & Buono, 2005). If communication within and/or between groups becomes sour (results in negative outcomes), knowledge transfer and development activities will be affected. Like-minded intra-group communication can also be affected by 'group think'. Group think occurs within a group of like-minded people who are constrained by a pre-disposed and similar capacity of knowledge (Brown, Denning, Groh, & Prusak, 2004, p. 49). This literature provides evidence that the success of knowledge transfer and development within communities remains relative to the quality of social interaction within and between groups.

The three methods of knowledge capture discussed above were discussed widely in the reviewed literature. There was far less attention given to one-on-one knowledge sharing. The internalisation of knowledge by individuals or as a collective is closely related to 'learning by doing' (Styhre, Indelgard, & Roth, 2001). Learning from a person who is sharing their tacit knowledge often occurs within a climate of situated learning during one-on-one conversation, or from being helped with an immediate problem

(Alonderiene, Pundziene, & Krisciunas, 2006). One-on-one learning is of importance to this study as a successful knowledge transfer process. The knowledge is shared because the 'holder' has made the choice to share, and therefore subtly authorises the recipient to learn, question, and benefit from that knowledge.

Important to this study is the remaining problem that has been circumvented in this literature – the willingness of people to participate in contributing to organisational knowledge systems. The knowledge system of any firm is required to consider the human influences on its knowledge management effectiveness (Brown et al., 2004). Knowledge management and knowledge systems must first be separated to gain a deeper understanding of how people develop and utilise their knowledge before business can contemplate appropriation value. The following section will review literature on knowledge development.

2.1.2 Knowledge Development

Knowledge is accumulated through formal (education) non-formal (training sessions) and informal (human interaction) processes (Styhre, Indelgard, & Roth, 2001). Literature by Alonderiene, Pundziene, & Krisciunas (2006) concludes that learning occurs informally through unstructured daily human interaction 70-90% of the time. Information transferred through informal learning is the most likely component of knowledge that is individually internalised as tacit knowledge. In comparison senior managers continue to spend resources on structured formal and non-formal learning in an attempt to gain a return on their investment, and spend the least in developing environments that encourage informal interaction (Alonderiene, Pundziene, & Krisciunas, 2006). To enable practitioners to gain a better understanding of why problems occur in practice the definitions of the components of knowledge must be clarified.

Knowledge is defined as being comprised at three levels of articulation: explicit (easily articulated); implicit (can be articulated), and tacit (difficult or not able to be articulated) (De Long, 2004). Explicit knowledge is expressed in formal and systematic language and shared in the form of data, scientific formulae and specifications, and in written documents that can be stored relatively easily. Codified explicit information is able to be learned by others and is valuable, but remains as static 'frozen knowledge' that does not include context and experience (Nonaka, Toyama, & Konno, 2000, p. 6).

'Frozen' knowledge fails to capture the dynamic process of knowledge development. The explicitness and tacitness of knowledge are two commonly accepted descriptions of knowledge components within the reviewed literature (Harlow, 2008; Polanyi, 1962; Polanyi & Prosch, 1975; Pyoria, 2007). Definitions of implicit knowledge were not clear and remain elusively within the area between explicit and tacit knowledge. However, Alonderiene, Pundziene, & Krisciunas (2006) offer a definition as 'something that is known, but is very difficult to verbalize'. Implicit is held within a person's mind, but is recognisable and can be brought forth by that individual to be made explicit.

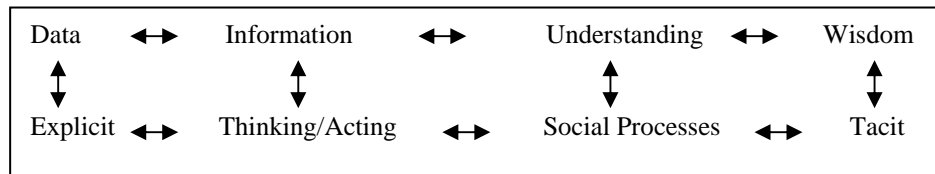
Other research has presented explicit and tacit knowledge as complementary and that both types are required to create knowledge rather than be considered as polarised components of knowledge. Nonaka and Nishiguchi (2001, Chp 3) make a definition between the roles and dimensions of knowledge that is important for the purpose of this study. Knowledge is created in the thinking and acting of individuals and is further shaped by social processes within an organisation. Whereas explicit knowledge by itself is quickly outdated and loses its meaning without the tacit insight (Smith, 2001).

Alonderiene et al. (2006) offer knowledge development continuums in varying forms. One of these continuums encompasses the concepts of understanding the information from the initial signal (eg, communication, symbol, observation), with that captured data received as information. Information is transposed to a level of understanding (meaning) through human interaction and once internalised, results in wisdom (insight).

Nonaka, Toyama, & Konno (2000) propose a four step approach: socialisation (tacit to tacit); externalisation (tacit to explicit); combination (explicit to explicit); and internalisation (explicit to tacit) conversion of tacit to explicit knowledge called the SECI model. This process is described as spiral, expanding the realms of contextual knowledge development across groups, then units, then throughout an organisation. However, the spiral affect also appears to depict a view that knowledge starts and ends at certain points. The concept of knowledge development is extended by later authors. Harlow (2008) states that knowledge exists as a continuum and that the interplay of tacit and explicit knowledge creates ever more knowledge. This latter

process suggests a dynamic process as shown through the addition of interactive links between the elements of previously mentioned continuums.

Figure 1: Interactive knowledge development



Adapted from Harlow (2008)

The interactive continuum shown above has been put together by the researcher through the interpretation of Harlow's descriptive analysis. Although not perfected, it is important to this dissertation because it implies that the more an individual expresses their knowledge through social processes and thinking and actions, the more knowledge is accumulated and shared.

Quality social interaction is required for knowledge development because critical tacit knowledge can only be shared when individuals transcend from 'self' into the social interaction process (Eucker, 2007). Within an environment that inhibits quality social interaction the 'links' between the dimensions of knowledge development can be severed or damaged. The importance of quality social interaction for continuous growth is beginning to receive more attention in the workplace as an increased volume of research is including sociological and/or psychological perspectives of behaviour and cognitive processes as described in more detail later in this review.

The combination of explicit and tacit knowledge creates steady growth of all knowledge (Harlow, 2008; Polanyi, 1962; Polanyi & Prosch, 1975; Pyoria, 2007). Many companies are using tacit knowledge to enhance formal qualifications. Workers that lack formal education and training, rely on their common sense and intuition, or tacit knowledge to keep up. In practice, it does not appear that the value of tacit knowledge is able to be managed to any significant degree as outsourcing of professionals remains a popular practice (Smith, 2001). Smith's literature review was directed from an organisational economic point of view, but concluded in a manner that supported a sociological view. Management systems are crucial but it is the human sense-making that makes explicit knowledge useful. Tacit knowledge is often unobservable and actioned unconsciously. It is transferred through 'one-of-a-kind spontaneous, creative conversations that occur

when people exchange ideas and practicalities in a free and open environment (2001 p.315)

Difficulties occur when strategies of a business ignore the development of environments that are congruent to people sharing their tacit knowledge through informal interaction. Attempts to capture tacit knowledge are enacted as if it was explicit, tangible and codifiable (easy to articulate), ignoring its situational embeddedness within social practices and values (Greene, 1969; Polanyi, 1959; Polanyi & Prosch, 1975). Accessing individual resources of tacit knowledge for the purposes of appropriation will not occur successfully until informal environments are created where people feel secure in sharing knowledge (Plesk, Bibby, & Whitby, 2007). This dissertation thus explores tacit knowledge from its academic inception through to contemporary understanding of the concept. Managers and individuals will gain a better understanding of the knowledge concepts with the following summary of tacit knowledge.

2.1.3 Tacit Knowledge

Michael Polanyi's early works during the 1950s-1960s in the form of lectures and books are frequently cited in modern literature regarding the introduction of tacit knowledge as an imperative component in the formation of all knowledge. Polanyi's literature is complex and written from a perspective forged from his medical scientific background in the mid-1900s. A number of authors have critiqued, reviewed or cited his literature in later years (Jha, 2002; Pyoria, 2007; Schwartz, 1891; Stenmark, 2001) however these attempts have also presented the concept in a complex manner. In an attempt to simplify his philosophy the following portions of his literature are discussed.

Polanyi brought together the scientific perspective of logic, and the arts perspective of understanding and meaning (Polanyi, 1959, pp. 11-39). Explicit knowledge requires the integration of tacit processes to grow that knowledge into intellectual power. Tacit power makes sense of experiences – the process of understanding. Innovation and discovery is achieved by the stimulation of tacit imagination 'striving to comprehend a solution believed to be predetermined' (Polanyi, 1966, p. 88).

Polanyi states that the tacit personal understanding of knowledge predominates explicit knowledge and is therefore is the ultimate power for acquiring and holding knowledge (Greene, 1969, pp. 123-180). This particular lecture by Polanyi presents numerous examples of the process of understanding. For example, an idle piece of machinery

means nothing unless someone understands how to use it (make sense of it). This process is a combination of understanding, performance of skills, activation of the senses, and mastery of the machine (Polanyi, 1962).

Polanyi (1962) argues that it is the combination of all facets of a whole that are linked by tacit knowing – that all knowledge has the structure of tacit knowledge. He describes the integration of ‘focal’ conscious awareness (seeing the explicitly obvious) and the ‘subsidiary’ levels of sub-consciousness (underlying understanding or meaning) that underpins all scientific logic. It is the initial gap between focal and subsidiary knowledge that creates a problem that if of interest, will be closed by exploration, experiences, and tacit inquiry resulting in an understanding (Polanyi, 1962). Polanyi concludes this lecture by stating that all manner of scientific problem solving can be achieved only if we have the power to integrate focal components by subsidiary tacit knowing – the focal is dependent on the subsidiary.

Contemporary literature frequently acknowledges and quotes Polanyi’s work. A modern analysis of Polanyi’s philosophy reiterates his explanation of the importance of integrating the tacit with the explicit (Jha, 2002). The analysis and understanding of a problem or new object, then makes that level of knowledge subsidiary (tacit). Tacit knowing forms the building the blocks of knowledge and becomes the subsidiary on which higher levels of knowledge relies.

“...in a hierarchy levels of knowledge are stacked on top of one another in such a way that the focal object of the first level becomes the subsidiary of the next.”
(Jha, 2003, p. 63)

While it is important to acknowledge the beginnings of tacit knowledge literature, the scope of this dissertation does not allow for the complexity of its origins to be investigated further. It is appropriate to move on to recent literature that is written in a manner that brings analysis of the concept closer to ‘what we intuitively know’ (De Long, 2004; Stenmark, 2001). Contemporary literature, while frequently relying on Polanyi’s philosophy, explains tacit knowledge in a simplified manner.

Tacit knowledge constitutes what people know and know how to do (Anantatmula & Kanungo, 2006). Tacit knowledge is defined as the ‘deep smarts’, the ‘know how’ (Maqsood, Walker, & Finegan, 2007), the experiential life long wisdom that can effectively operationalise explicit information in a constructive and iterative manner. In

particular, Leonard & Swap effectively describe tacit knowledge as held by ‘people whose intuition, judgment, and knowledge, both explicit and tacit, are stored in their heads...’ (2005, p.1).

Context and experience is stored deeply in an individual’s mind as tacit knowledge (Brown et. al., 2004), and is transferred through social interaction (Ardichvili, Page, & Wentling, 2003; Walsham, 2001). People regarded as possessing ‘deep smarts’ are the people who are asked questions, their judgements are trusted, and their ‘voice’ holds more weight than others’ opinions (Eucker, 2007; Leonard & Swap, 2005). It is the intuitively known ‘value’ of trusted knowledge and judgements that stimulates attempts to quantify it as an asset (De Long, 2004).

Techniques proposed in an attempt to resolve the issue of managing knowledge focus on an attempt to find a process that can measure tacit knowledge and then align those measurements with performance (De Long, 2004; Eucker, 2007). It is suggested by Ardichvili, Page, & Wentling (2003) that evaluating knowledge directly may not be possible because knowledge management does not fit traditional quantifiable measurement practices. Instead they suggest assessment by measuring the impact of contribution factors to performance indicators as a more useful method. Their study initially identified 26 criteria of performance measures that were rated for a) importance (significance or consequence) and, b) effectiveness (usefulness) within each organisation. The authors deductively concluded that the most important measurement criteria were firstly, improved communication and collaboration and secondly, contextual relationships between knowledge management results and outcomes of the bottom line. However, successful solutions to the problem of measuring tacit knowledge have not yet been found. While measurement is not possible, the purpose of this dissertation is to stimulate additional empirical data that will encourage managers to work closely with and give more attention to the value of the tacitly held knowledge older workers have accumulated over their life time. (Appendix 1B)

2.1.4 Older Employees

The contribution of older employees receives little appreciation (McGregor, 2005). One study (Perry & Finkelstein, 1999) discusses perceptions of decreasing intelligence as people age that leads managers to seek younger employees and more ‘intelligent’ people to progress knowledge growth within business. On the other hand, the replacement of

knowledge through recruitment is not only expensive, but creates a long-term negative affect on all people.

“Wisdom would suggest that the most foolish and least affordable of prejudice is that directed against a group which we must all join.”

Comfort cited in Trew & Wyatt Sargent, 2000., p. 135.

The belief that older workers were expendable became explicit in New Zealand during the restructuring of organisations in the 1980s. Voluntary redundancy was often targeted at older workers. Older and very experienced workers accepted payouts secure in the belief they could get another job. However, organisations did not realise the value of the lost knowledge older workers took with them until too late (Trew & Waytt Sargent, 2000). The problem with knowledge held tacitly is that it lies in the level it can not be articulated with the level of related tacit power held by the individual being also tacit and not easily recognisable. Tension can arise when individuals perceive a potential risk of losing power and competitive advantage by making their tacit knowledge explicit – thereby giving away their personal power (Stenmark, 2001). Losing knowledge power is of particular importance to senior employees because of a fear of becoming redundant afterwards (Slagter, 2007).

The percentage of employees in the age group of 50-60 years has significantly increased over the last 10 years. This increase in senior employees has particular consequences for managers that remain unattended (Slagter, 2007). Slagter’s explorative study outlined presumptions managers held that their senior employees attract higher costs – an assumption that has not significantly changed over the years. Positive and negative assumptions showed the following characteristics.

Figure 2: Assumed Characteristics of older employees

<i>Positive and negative characteristics of senior employees according to managers</i>	
Postive characteristics	Negative Characteristics
Responsibility and maturity Commitment to work Experience ‘Staying put’ in a job	Lack of flexibility Slow to adapt or resistance to change Outdated skills, particularly in relation to new technology Lack of mobility Difficult to retrain Prone to ill-health

(Slagter, 2007)

Negative assumptions were supported by some literature (Trew & Waytt Sargent, 2000) and contradicted by others (McIntosh, 2000 in Society of Human Resource

Management, 1998 cited in Slagter 2007). Positive attributes were in general: older workers had low turnover rates; were flexible and open to change; possessed up to date skills; were interested in learning new tasks; had low absentee rates; and had few on-the-job accidents. With the abolition of a compulsory retirement age in New Zealand, employers will need to change the way they think about, treat, and value their older workers (Trew & Waytt Sargent, 2000). Trew & Waytt Sargent expend considerable effort encompassing multiple problems organisations will incur if they choose not to consider older workers as a valuable asset. Of particular importance to this study is the ability to change attitudes of managers who may not even be aware of their negative false assumptions about older workers.

Additional support to the above research was provided in an article (Gray & McGregor, 2003) that compared points of view from older workers and employers in New Zealand. The discussion identified issues surrounding the human resource management of older workers. The key factors that emerged were that older workers can not be categorised as a homogenous group. In summary, there are older workers who believe they have much to contribute to the workplace while others are looking to disengage from employment on their own terms. Gray & McGregor placed an emphasis on human resource development methods that do not consider older workers as having individual motivators that stimulate the varying levels of participation and engagement in the workplace. While 94% of employers surveyed agreed that training programmes should be available to all workers irrespective of age, the survey of older workers 'suggests a gap between what is espoused and what actually occurs in selecting employees for training' (2003, p.348).

Slagter (2007) focussed on the human factor of knowledge management and proposed guidelines for human resource managers in aligning critical success factors (CSF): coaching and leadership style; structure, roles, and responsibilities; emphasis on learning an education; attention to motivation, trust, reward and recognition; and, establishing the right culture. CSFs should be integrated to human resource strategies and managers are recommended to engage with senior workers to assist in the reduction of negative assumptions often held by managers.

Overall, an increased level of attention to senior workers, and trust in their manager is critical for senior workers to engage in knowledge sharing activities. When senior

workers distrust the motives of managers to engage in sharing their knowledge the situation can result in a fear of being replaced once they have given their knowledge (or knowledge power) to others. In his concluding remarks, Slagter recommended that more research should be carried out in aligning trust in managers with knowledge management initiatives instead of the emerging need to invest in mechanisms to measure knowledge (Slagter, 2007).

Critical problems have emerged in the reviewed literature (as discussed in previous sections) need to be explicitly identified:

- some authors have estimated that up to 90% of knowledge is held tacitly (Alonderiene, Pundziene, & Krisciunas, 2006; De Long, 2004) with 70-90% of that knowledge accumulated through non-structured informal human interaction (Plesk, Bibby, & Whitby, 2007);
- tacit knowledge is difficult to value or measure even for the individual because often people are not aware of the quantity they hold (de Heus & Messick, 2004; Lines, Selart, Espedal, & Johansen, 2005; Stenmark, 2001);
- tacit and explicit knowledge is developed and communicated within a dynamic social process that can be damaged at any stage if relationships are not congruent to positive social interactions (Alonderiene, Pundziene, & Krisciunas, 2006; Harlow, 2008; Nonaka & Nishiguchi, 2001);
- there is a lack of appreciation older workers' substantial resource of tacit knowledge that may be 'lost' as they retire from the workforce (De Long, 2004; McGregor, 2005; Slagter, 2007).

These issues will now be addressed further for the purposes of this study. The reviewed literature portrays the need for managers to gain a more in-depth understanding of knowledge. For the purposes of this dissertation, the descriptions of components of knowledge need to be summarised to assist in defining the importance of exploring tacit knowledge from the perspective of the older employee. The following summary has been compiled by this researcher by drawing together the

descriptions and discussion provided by management, sociological and psychological literature.

Figure 3: Commonly Described Components of Knowledge

<i>Three components of Knowledge</i>		
<i>Explicit</i>	<i>Implicit</i>	<i>Tacit</i>
Held as written text in manuals, instructions, and documents (artefacts).	Held in the minds of people	Held deeply in the minds of people as experiential know how
Easily articulated or codified (written)	Can be articulated if people chose to	Difficult or impossible to articulate
Quantifiable	Can be measureable	Unmeasurable
Transferred as facts/data – static and ‘frozen’ in time	Transferred as information that supports facts/data	Context and meaning that operationalises static information.
Learned through education programmes	Learned through training sessions	Learned through personal experiences
Reliant on tacit knowledge availability		Forms the building blocks of new knowledge
Knowledge power is owned by multiple parties		Provides knowledge power for individuals
Able to be copied by competitors		Older employees hold an extensive lifetime of experiential tacit knowledge
Transferred easily upon access to systems, documents		Transfer requires trust in managers and colleagues
At least 10% of knowledge is held as explicit and implicit knowledge		Up to 90% of knowledge is held as tacit knowledge
10-30% accumulated through formal or non-formal training processes		70-90% transferred through informal social interaction
Attracts most investment		Attracts least investment

This table summarised the varying descriptions of knowledge components for the purposes of this study. There is however, less understanding about the influences that impact on the effectiveness of tacit knowledge transfer between people in the workplace context. The following literature was reviewed to clarify some common

problems that create barriers to providing an informal culture where people internalise knowledge transfer activities.

2.1.5 Influences on Knowledge Sharing in Practice

Culture is defined as the collectively understood beliefs and values that formulate expectations of behaviour, communication and decision making processes (McAdam, Mason, & McCory, 2007). The social conditions, culture and climate within an organisation is widely recognised as having a substantial effect on people's willingness to share knowledge (2007, p.45). Instead, management strategies focussed on capturing knowledge emphasise the latest technologies rather than developing an informal culture focussing on a good team spirit and skilful managers (Pyoria, 2007).

'Ba' as proposed by Nonaka, Toyama & Konno (2000) is a Japanese term that symbolises the shared cultural foundation from which information is interpreted into knowledge through a collectively shared context or 'place'. Japanese cultural values of collectiveness are strong and individuals participate in the cultural norms. In western society where cultural collectiveness is weaker, the continuity of knowledge development can decline in an environment that restricts movement away from homogenous management systems (Rousseau, 2001). Additional problems occur when human resource management perspectives treat older workers as a homogenous group (Gray & McGregor, 2003), inflexibility can create problems within management practices that restrict knowledge flow.

Management systems are often introduced as definitive processes for capturing knowledge. Research indicates that knowledge flows more freely when employees view knowledge as belonging to the group and outcomes of sharing that knowledge positively relates to the public good (Ellis, 2007; Rousseau, 2001), rather than an explicit asset of the organisation. Public good refers to the reciprocity of knowledge transactions for the benefit of others. The perception of public good is strongly associated with organisations such as the health sector where the outcome of knowledge sharing is critical for the good of patients. However, in environments where knowledge sharing is desired, strategies infrequently relate problems within a culture to managers themselves (Karsten, 2006; Sveiby, 2007).

Management and dissemination of knowledge depends on the ability of managers to create an environment that recognises the individuality of knowledge (Karsten, 2006, p. 54). Sveiby (2007) identified two main issues that prevent knowledge sharing:

- lack of organisational context-building information and knowledge, and
- managers who do not share/diffuse information

Sveiby identified strong similarities to other literature that links manager behaviour to workplace relationships. Relationship and communication processes imbedded within an organisation or group culture influence how people interact in the workplace. Managers are the conduit of information and context (Perry & Finkelstein, 1999). If managers understand complexities social interaction that supports tacit knowledge transfer they will be able to adjust strategies to achieve better outcomes (Sveiby, 2007). Schneider (2007) identifies that here is a lack of clarity of what knowledge is within research, so how can managers learn to develop effective knowledge management practices if parameters of good practice are not clear?

Knowledge transfer is influenced strongly by characteristics attributed to management behaviour. The attitudes of the nearest supervisor or manager is a major issue that influences knowledge transfer (Benson & Brown, 2007). The blame for negative experiences in the workplace was frequently attributed to the nearest manager (Morrison & Nolan, 2007). Two common negative related responses described managers who view questions as threatening, and who exercised a poor delegation of tasks. Perceptions of a manager's skills and fairness of actions impact on individuals' sense of fairness and trust. Five specific causes of deteriorating relationships in the workplace have been presented from a narrative analysis as being 'personality, distracting life events, conflicting expectations, promotion, and betrayal' (Morrison & Nolan, 2007). A difficult problem for managers is to gain the ability to anticipate negative co-worker relationships (Sias, Heath, Perry, Silva, & Fix, 2004).

Outcomes of deteriorating relationships included emotional stress, lowered performance, and higher turnover of staff (Morrison & Vancouver, 2000). This is a New Zealand based study that has built on Sias, et al., (2004) and concludes that workers depend on their managers to provide support to overcome negative relationships in the workplace (Mathews, 1982). The most common outcome of

negative relationships was the impact on communication (Morrison & Nolan, 2007). Sub-problems inherent in negative communication are a lack of trust or honesty within the relationship, and withholding information. These factors heavily influenced respondents' ability to perform their jobs. Additional problems identified were that respondents' emotional reactions induced stress and feelings of anger and frustration that resulted in some cases in a lowered self esteem and level of confidence. The lack of manager support in resolving conflict revealed a perception of unclear and disorganised management structure, resulting in a sense of powerlessness.

Overall results from Morrison & Nolan's (2007) research show a clear indication of blame directed at the manager's lack of ability to manage negative interactions. The authors have acknowledged that responses from people that had not experienced conflict in the workplace were few in comparison to others. All the same, the emergent themes on outcomes of negative interactions were strong. Behaviour and decision making processes are closely linked to how individuals process conflict situations. It is important to this study to gain a deeper understanding of how human behaviour is affected by how individuals perceive themselves in the workplace context.

Behaviour and Decision Making

Human behaviour and decision-making processes are influenced by emotionally based factors such as motivation and commitment (Haines & Kray, 2005), willingness to participate in learning and decision making processes (Bowditch & Buono, 2005; Ely, 1995), conditions of trust and perceptions of value, and feelings of security (Balkin & Richebe, 2007; d' Aspremont, Bhattacharya, & Gerard-Varet, 1998). The feelings of trust, value, and security are strongly effected by the relationship characteristics such as conflict, concealment, manipulation, disrespect and negative interactions between people (Acker, 2006; Holmes, 2006). Negative relationships can be caused by feelings of jealousy or competition that generate impatience and irritability with others (Middents, 1990). Outcomes of negative emotions include impaired concentration, reduced organisation commitment and productivity, and increased intentions to quit (McElroy, Seta, & Waring, 2006). Experiences that affect emotions also impact on how one perceives one's own value.

Perceptions of Self-Esteem

Self-esteem is the positive or negative, or favourable or unfavourable, attitude an individual holds towards self (Foos, Schum, & Rothenberg, 2006). In other words, how one regards or likes/dislikes oneself. McElroy, Seta & Waring (2006) examined the 'framing effect' by reviewing studies on personality factors that influence decision-making. They focussed on personality construct and self-esteem as they relate to positive and negative attributes of how a problem is framed in presentation and judgements of risk involved in decision-making. Low self-esteem imposes a negative framework surrounding decision making judgements. High self-esteem and the need for cognition determines that the negative or positive framework of a problem has less importance and will be overcome by a need to think deeper about the problem. The emergent conclusions from this study state that decisions are affected partly by how a problem is perceived (in a positive or negative frame) and partly on the norms, habits and personal characteristics of the decision-maker. In summary, if a person holds low self-esteem negative consequences of decisions will be sensed as stronger, while a person who holds a high self-esteem will consider a problem separated from negative or positive consequences. Degrees of positive or negative self-esteem are accompanied by corresponding emotions that can enact corresponding behaviour.

Influences on Emotions

Emotions form a critical component of human behaviour that managers must be able to understand because they form a component of social capital. Social capital in the context of this study, is the value an individual places on their occupational success or failure (Moerbeek & Need, 2003). Moerbeek & Need questioned the extent foes (people perceived as enemies) at work affect a person's social and professional value in the market place. They concluded that if a person perceives they have enemies at work, the length of stay at that job is shortened. An analysis of the relationship between emotions, job satisfaction, and intention to quit a job has identified that positive emotions increase a sense of job satisfaction and lower intentions to quit (Cote & Morgan, 2002). Emotions are stimulated by experiences or perceived potential experiences that stimulate the decisions made by individuals.

Emotions are generated from experientially learnt responses that constitute a set of rules and theories that facilitate a person, and are held at varying levels of consciousness

(Schienman, 2006, p. 496). Identifying past emotions linked to positive or negative experiences while participating in knowledge sharing activities will predetermine if an individual is willing to repeat the experience.

Negative emotions can result in varying degrees of anger. 'One of the most prominent reasons for anger involves direct or indirect actions that threaten an individual's self-concept ...' (Nonaka, Toyama, & Konno, 2000; Schalk & Roe, 2007). Emotions are the outcome of events that change the conditions of self concept, self esteem and feelings of being in control of one's own life (English, 2005; Swap et al., 2001). Emotions can be positive or negative and directly impact on the degree of trust a person feels towards others (Hasgall & Shoham, 2008; Schalk & Roe, 2007). The sense of trust individuals feel towards others within relationships is important to this study because it underpins how individuals feel towards interacting with others particularly when sharing personal knowledge.

Trust within relationships

Trust is an outcome rather than an input to knowledge transfer (Hasgall & Shoham, 2008). Communication between people is greatly enhanced by trusting that the other person will receive your comments without negative feedback. The gap between the desire to trust and the actuality of trusting others is caused from barriers that exist within environmental conditions (Sveiby, 2007). When an individual's perception of trust is confused, barriers are created within communication activities. The barriers are accentuated if people believe that they will be criticised or that their contribution will be devalued (Schalk & Roe, 2007). Individuals form implicit expectations of trust that can be altered within various cognitive pictures they hold relating to past and future expectations of behaviour from other people.

Implicit expectations of others are held deeply within a person's value system (Schalk & Roe, 2007). Value systems are deeply ingrained in life-long learning experiences and are closely related to beliefs and expectations held within the cognitive phenomena of the psychological contract, social exchange, and social comparison. These three cognitive phenomena are important to the way in which an individual perceives their reality within any situation and strongly relate to the question of this dissertation. It is therefore important to this study to gain an understanding of the

ways these three processes impact on an individual's perspective of the quality of relationships in which they choose to participate.

Psychological Contract

The concept of the psychological contract was introduced by Argyris in the 1960s (Swap et al., 2001). The psychological contract is a powerful determiner of behaviour in organisations (Rousseau, 2001; Schalk & Roe, 2007) that binds together individuals and helps them to achieve their goals (Balkin & Richebe, 2007). This phenomena integrates a person's identity, sense of purpose and value, sense of place within a situation, and future expectations of the employment relationship (Blau, 1964; Ekeh, 1974). Problems arise with the psychological contract because it is an individually held set of beliefs that are assumed to be mutually understood by the other party (Rousseau, 2001).

The beliefs held by an individual within the psychological contract are based on expectations of mutual reciprocity and judgements of fair treatment (Schalk & Roe, 2007). Conditions within the psychological contract are implicit and unspoken and include intangible expectations such as a sense of being cared for and treated with dignity (Lawler & Thye, 2006). From the perspective of the individual, if the contract is perceived to be breached by the other party (eg, manager, colleague or 'organisation') there can be significant consequences (Rousseau, 2001; Schalk & Roe, 2007).

The severity of consequences will relate to the severity of the breach as perceived by the individual. If a deviation from the implicit beliefs of the psychological contract occurs, and this change is brought about without the individual having time to adjust their beliefs, they will perceive the other party has breached the contract (Schalk & Roe, 2007). The resulting feelings of unfairness indicate that the other party owes a debt to them. Consequences of a breach of contract from the perspective of the individual can include an increased desire to leave the workplace, increased absences, lower productivity, and negative social behaviour resulting in a withdrawal of knowledge. Consequences are enacted to rebalance of the sense of debt owed (Brown, Ferris, Heller, & Keeping, 2007; Goodman & Haisley, 2007). However, the psychological contract is intangible and unmeasurable and not formally recognised in the broader management literature as an influence on behaviour in the workplace (Schienman, 2006, p. 496).

In a recent study by Schalk and Roe (2007) found that employees who did not receive expected obligations such as support/promotions from their employer reacted with emotions of anger and disappointment resulting in a stronger intent to leave. Consequently, individuals will revise their contract to fit circumstances and correct their response, leave or violate the contract, or balance the sense of obligation between themselves and their employer (or other person). The dynamic model of the psychological contract presented by Schalk and Roe allows for the continual adjustment between the outer boundaries of tolerance. Unexpected deviations outside the set personal limits can have drastic consequences relating to the level of commitment to the workplace. For example, leaving the organisation was commonly attributed to events such as harassment, excessive work pressure, and bullying by supervisors or colleagues. Therefore in these ways the psychological contract closely interacts with processes inherent to social exchange activities.

Social Exchange

The psychological concept of social exchange is based on implicit expectations of reciprocity between individuals (Greenberg, Ashton-James, & Ashkanasy, 2007). The economic perspective of social exchange does not recognise learning and acquired tacit knowledge as an informal sharing of rich tacit knowledge through processes of socialisation and internalisation (Blau, 1964; Ekeh, 1974). Instead, some authors propose social exchange as conscious decisions of whether or not to enter into a relationship based on cost/reward judgements. This view includes a willingness to also cause harm to others based on a perception of being harmed either in the past or future by the other person (Kivetz & Tyler, 2007).

The social exchange theory is based on decisions people make relating to judgements made about the cost or reward gained from that interaction (Sveiby, 2007). That is, whether a person decides if the benefit of the interaction is more valuable than any negative outcome. Exchanges occur also with the assumption that doing something together is likely to present a better reward than if done alone (Kaplin, 2006). However, decisions on whether to participate in social transactions can also be influenced by perceptions of status and fit within an individual's environment.

Social Comparison

Social comparison processes within organisations are two-fold. Firstly, social comparison relates at systemic level when used as a tool for performance evaluations, promotions, and the identification of leaders (Greenberg, Ashton-James, & Ashkanasy, 2007). In the organisational context, social comparisons are subjective and depend on unbiased judgements of managers. While this systemic view is interesting to note, for the purpose of this study, it will not be discussed further.

Secondly, and important to this study, it relates to how individuals perceive themselves as above average or below average in their skills and abilities through a selection of referents (Bowditch & Buono, 2005; Brown et al., 2007; Greenberg, Ashton-James, & Ashkanasy, 2007). Perceptions of incongruence between where an individual wants to be in the situational hierarchy, and where they consequently revise their sense of fit affect their sense of self-esteem. Upward comparison (compare self to those who are ‘better off’) and downward comparison (compare self to those who are ‘worse off’) (Brown et al., 2007, pp. 59-60). Upward and downward comparison each have opposite effects on attitudinal and behavioural outcomes. It is important that managers understand the consequences of social comparison judgements made by individuals (or groups) so they can identify and deal with consequences. The need to reduce uncertainty related to job ambiguity and autonomy, and self-evaluations are proposed as antecedents to social comparison processes. The motivating factor of social comparison is a desire for self-improvement. Self-improvement requires an accurate indication of where one currently stands within the social context. Self-improvement satisfies the need for uncertainty reduction and therefore represents a basic social action within the workplace (Brown et al., 2007).

Social comparison processes are carried out by individuals through varying methods. It is contained within social behaviour and implicitly activated through for example, gossiping with others, informal conversations, conflict between people (Greenberg, Ashton-James, & Ashkanasy, 2007), and perceived breach of the values and beliefs held within the psychological contract (Rousseau, 2001). Self-values represent goals and standards from which an individual will measure self within any situation (Brown, 1994). In summary, social comparison processes are stimulated by organisational factors and individual comparison processes.

Summary

The reviewed literature did not differentiate between men and women in the workplace. However, women experience specific problems that relate to gender, stereotypical attitudes and generational differences in the workplace that are historically inherent in society. These problems are now explored in relation to conditions that may influence decisions older women make whether or not to share their tacit knowledge in the workplace.

The focus of this section is literature that has considered historical and current influences that impact women in the workplace taking related literature and selecting the common themes that have emerged. Conference proceedings from a New Zealand conference (Armstrong, Briar, & Brooking, 1992) and a report commissioned by the Social Policy Agency, New Zealand (Davies & Jackson, 1993) identified historic problems that continue to pursue women today, albeit in a less visible manner.

“To a large extent women do not do “unskilled” jobs because they are the bearers of inferior labour; rather the jobs they do are “unskilled” because women enter them already determined as inferior bearers of labour”.

(Elson & Pearson, 1981:92 cited in Armstrong, 1992, p.34.)

2.2 Context of Women's Careers

Research by O'Neil & Bilimoria (2005) has established that the nature of women's career patterns and life contexts are distinctly different than those of men's. Women's life paths are inherently complex integrating numerous family and social responsibilities that can disrupt career pathways (O'Neil, Bilimoria, & Saatcioglu, 2004). O'Neil & Bilimoria (2005) state that for women, the boundaries between family and work responsibilities are permeable and reactively unanticipated. Women's life decisions and choices are influenced by non-career activities. The degree of perceived external or internal locus of control is influenced by numerous factors. Locus of control in this sense is described as whether a woman believes she is in control of the events that impact on her life (internal locus of control) or if events in life are controlled by external forces (external locus of control) (Domagalski & Steelman, 2007). The degree of either an internal or external locus of control perceived by a person will impact on that person's emotions, feelings and behaviours. An external locus of control may result in feelings of lack of control of actions, emotions and a low sense of value. An internal locus of control

may result in a sense of being in control of actions, emotions and create a sense of high self-esteem.

Similarly, the career locus is described by O'Neil & Bilimoria (2005) as either external or internal. The external career locus is when a woman perceives career opportunities and success are due more to chance or luck (unplanned). An internal career locus is if a woman holds beliefs that she is responsible for her own career success and in charge of creating and managing her own future career. For example, women tend to pass up networking and other activities outside of work hours in favour of family commitments. Men's career and life patterns traditionally display more linear patterns, are planned and rewarded for attributed job commitment displayed by for example, working long hours and participation in after work networking activities (Henry, 2003). Consequentially, women have less control over their career choices. Similarly, this concept also relates to women's overall life experiences. The sense of an external locus of control is negatively affected by historical values and beliefs inherent in a masculine society.

2.2.1 Gender, Stereotypes and Generational Differences

In most societies, 'the female gender tends to be undervalued or marginalized where knowledge creation and diffusion is concerned' (Brown, 1994). The undervaluing of women's knowledge relates to historical male judgements of the validity and the 'truth' of knowledge women hold and speak. In this context, 'undervaluing' refers to the perceived lack of reality and validity within women's knowledge as understood within masculine beliefs and values (Darlington & Mulvaney, 2002). Gendering knowledge, from a feminist perspective, primarily favours masculine objectives based on implicit assumptions and judgements of value (Henry, 2003).

Gender

Research is showing an increasing awareness of what 'gender' actually means and how 'gender' is 'done' through social interactions (Leahey, 2006). Data for Leahy's ethnographic study was collected through interviews, observations and participation in meetings, training sessions and seminars, and internal documents. The majority of the 150 employees were women working within a masculine management regime. Findings identified a differentiation was made between women employees' democratic approach to decisions, and male employees' focus on results or outputs. Business practices continue to reward measurable results and outputs. Additionally, business presentations

were more often presented by men and when women did present, senior managers directed their questions to other men in the audience rather than the female presenter. These actions implicitly devalue women's knowledge. Internalised beliefs about the value of women's knowledge are compounded by the accompanying occupational stereotypes attributed to women within society.

Stereotypical Attitudes

Stereotypical attitudes are perceptions and assumptions held by individuals and projected at a 'societal group' about generalised attributes such as intelligence, reliability, behaviour, and work ethic. Occupational stereotypes convey impressions about a person and their background reflecting a perception of competence (Park, Pringle, & Tangri, 1995). Historically, women have entered the workplace in lower level stereotyped positions that are perceived as requiring lower level skills and knowledge (Henry, 2003). Henry's study was based in Australia where he interviewed 20 subjects from professional occupations, and 20 subjects from manual occupations. Additional data was gathered from 490 questionnaires from random respondents (including 145 from 41-50 year olds, and 93 from over 51 year olds). This study examined the relationship between occupational status and selected psychological dispositions. He found that if a person perceives themselves as having a lower-status than others, they will also set up conditions for powerlessness and personal limits. The flow-on effect of perceived limitations influences beliefs in self-efficacy and beliefs that others should receive promotions rather than themselves with their own restricted boundaries. This in turn results in a focus on risk-reduction rather than seeking growth. Risk reduction influenced behaviour and tended to become self-fulfilling and reconstructed stereotypical beliefs regarding women's knowledge and their need for positive relationships.

English's (2005) reading is valuable as a contrast to a mainstream belief that all women desire positive relationships with others. The desire of some women to solve conflict in a direct manner can in fact lead to disempowerment of other women who may choose not to exercise a strong voice on issues. Therefore direct conflict resolution methods such as confrontation of issues can precede perceived power and authority status of those exercising this method of communication. Women who prefer more passive methods of conflict resolution and who perceive power and authority inequities, could choose to exit the organisation (O'Neil & Bilimoria, 2005).

On the other hand, sharing knowledge as a reciprocal social exchange can result in empowering multiple parties (Darlington & Mulvaney, 2002). Some studies (Eucker, 2007; Leonard & Swap, 2005) examined traditional masculine models of knowledge sharing activities and added feminist influences and styles to provide a descriptive model of reciprocation and empowerment. Feminist influences proposed that participants were respectful of each other and self-confident for exchange to be mutually beneficial. Darlington & Mulvaney did justify their empowerment model by stating that it would be most effective within a non- hierarchical process of decision making. Consequently, this literature does not address to any great depth that women are not all the same nor are they always respectful of each other. Neither does it address difficulties that arise through age discrimination.

Age Discrimination

Age discrimination affects younger and older people (Snape & Redman, 2003). Anti-discrimination is defined in a New Zealand based text, as those people aged between 16 years and upwards with each age group experiencing its own sociological characteristics (Trew & Waytt Sargent, 2000). Unlawful age discrimination is when a particular employee is being subjected to less favourable treatment 'by reason' of his or her age (2000 p.6). Trew & Wyatt Sargent propose anti-age discrimination legislation for those below 30 and above 50 years old. An example in relation to this study, is that people within the age-group between 55-65 years are more likely to face the risk of unlawful mandatory retirement (2000 p. 3). Management strategies that force older workers and in particular to this study, older women, into retirement are strongly related to negative stereotypical attitudes of managers as outlined in a previous section. Important to this study are the implicit strategies such as undervaluing, negative assumptions, and lack of quality communication with older workers that continue to create barriers to knowledge transfer from the older to the younger employees.

Sveiby (2007) identified comments from women over 50 years (in a support role) of for example, a) positive experiences 'everyone pitches in'; and b) negative experiences, 'people who keep knowledge and information to themselves for competitive reasons are resented'. Yet in women only organisations there remains recurring issues of conflict, segregation and isolation (CEDAW Report, 2002).

Women are individuals, not a collective social group. Women hold individual beliefs, values and desires that will be satisfied in many different ways. Contrary to historical beliefs, all women are not able to be generalised as caring, relational beings.

Life experience of this researcher suggests that not all women are self-confident, nor are they respectful of each other in the workplace and equally participate in negative and positive interactions. Inequities of power in any situation create polarisation of people within a social group stimulating perceptions of unfairness and feelings of fear and anger (Trew & Waytt Sargent, 2000). The dynamics between these polarised extremes are determined in context of each woman's life experiences and expectations of future experiences. In relation to the cognitive phenomena reviewed in an earlier section, negative feelings impact significantly on the quality of social interaction and the ensuing decisions whether to share tacit knowledge.

The focus of this study is on New Zealand women in the age group 45-70 years. Therefore the following section will identify some key issues appropriate to this local context.

2.2.2 Women in the New Zealand Context

A report produced by the National Advisory Council on the Employment of Women (NACEW) (Dwyer, 2008) challenged stereotypical assumptions of gendered roles between men and women for work and family care. This report shows that 94% of parents agreed that housework and childcare should be equally shared when both parents work. However, Dwyer states that the lower average hourly earnings of women is likely to be a barrier to men and women achieving a more even sharing of care responsibilities. Men continue to work longer hours resulting in women being the main care giver for younger and older family members. While women's employment rates are increasing in New Zealand, '...higher levels of caring responsibilities and lower levels of education, are associated with lower levels of labour force participation' (Johnston, 2005 as cited in Dwyer, 2008., p.5). 'Despite the growth in women's employment rates, most occupations remain segregated by gender' (Dwyer, 2008, p. 5). Women remain dominant within the service industries such as retail, accommodation, cafes and restaurants, property services, health and education (McGregor & Fountaine, 2006). Women are either still attracted by gendered roles, or are purposefully hired into those roles more frequently than men

despite legislations and policies introduced to combat discrimination against gender and age.

Older worker and anti-discrimination policies are relatively new to the New Zealand arena such as the Human Rights Act, 1993 and the Employment Contracts Act, 1991 (Trew & Waytt Sargent, 2000). The recognition for the need to focus on older workers has stemmed from an increased understanding that people will work and live longer alongside a dwindling birth rate. The older workers will outnumber younger cohorts within the next few decades. In the 1980s-1990s, older workers fell prey to organisational restructuring and many 50 year olds and over were displaced from their jobs (McGregor, 2005; Trew & Waytt Sargent, 2000). Policies relating to older workers now include: the removal of early retirement incentives and the abolition of compulsory retirement; the introduction of legislation on anti-age discrimination, and the provision of guidance and training for older workers (McGregor, 2005). While policies have been introduced and are enacted within government organisations, in reality statistics show that sectors external to government are unfavourable to women. The impact of contradictions between policy and reality for the majority of older women will be compounded as they move towards the latter stages of their careers.

The percentage of people aged over 50 years available to the New Zealand workforce is projected to rise from 2001 (12%) to 2031 (23%). New Zealand statistics show 47% of the workforce is made up of female workers, with 65% of those women being in full-time and 34.7% in part time employment (Statistics New Zealand, 2008). Women continue to be underrepresented in roles above the supervisor/line manager level. Although the current status of women in New Zealand statistics appear favourable, in the private sector women represent only 7.13% in leadership and decision making roles (McGregor, 2008). McGregor (2008) has reiterated conclusions of her earlier 2006 report showing that women's knowledge has continued to be undervalued and that women are considered less intelligent than men. McGregor supports her stance with the lack of movement between earlier statistics and the most recent figures, with the corporate sector still displaying unacceptable inequity of women in strategic positions.

Historic stereotypical attitudes remain within the New Zealand society with little attention given in literature to the reality of New Zealand women's lives in the

workplace context. The aforementioned reports by McGregor focus mainly on women working at a relatively high level of management and decision-making positions. Women have a long journey before they reach senior level positions. Women of interest to this dissertation are those working at low to mid level positions with low level or no formal qualifications. These roles include traditional female roles of administration, public service positions, and women who have entered traditionally male roles with the IT field.

2.3 Summary of Literature Review

This literature review has defined important strategic issues for managers to consider in their attempts to capture and gain appropriation from tacit knowledge held by older workers, and for the purposes of this study, older women. There remains a gap in literature from the perspective of how older women understand, value and utilise their tacit knowledge in the workplace. The following is a summary of common key points from related literature:

- The most common methods implemented in business to capture knowledge fail to integrate deeper human meaning with the data stored within ICTs (Ardichvili, Page, & Wentling, 2003; Pyoria, 2007; Schneider, 2007). While ICTs are successful in capturing data, human meaning is lost because data stored is frozen in time (Nonaka, Toyama, & Konno, 2000). The increasing dependency on data repositories is over-emphasised in practice and ignores the need for quality face-to-face interaction (Fawcett, 2002).
- Mentoring arrangements are successful in transferring knowledge from a senior employee to a selected learner. Research states that there is no strong correlation between mentoring practices and an improved performance of the business (Swap et al., 2001). The group mentoring process is proposed as successful in particular within the hospital environment where a strong support network already exists (Monge & Contractor, 2003). There is some overlap in literature between the concepts of group mentoring and COPs.
- Communities of practice (COPs) are proposed as an effective method of knowledge exchange because they support an informal culture (Pyoria, 2007; Schenkel & Teigland, 2008; Von Krogh, Ichijo, & Nonaka, 2000). Establishing COPs require change strategies to reallocate work tasks and

groups before they can become operational. Change strategies are significantly impacted by the quality of communication that supports implementation of change (Schenkel & Teigland, 2008). Additional problems occur when relationships are not managed effectively or COP creativity is affected by 'group think' – the negative result of limited knowledge held within the group (Bowditch & Buono, 2005).

The more personalised one-on-one learning situation is proposed as a successful method of knowledge transfer (Handley, Clark, Fincham, & Sturdy, 2007) yet has not been discussed by other authors. Although this method is supported as highly effective there are problems that remain inherent in practice. To ensure that informal knowledge exchange occurs successfully, an informal and trusting environment is critical for quality social interaction, and therefore knowledge transfer, to occur (Blau, 1964; Ekeh, 1974).

Managers are the key influence on communication and social interactions in the workplace (Mathews, 1982; Morrison & Nolan, 2007). Research states that managers do not have the skills and ability to manage negative relationships (Sias et al., 2004). The majority of conflict within relationships is not resolved by the manager and the blame for the resulting negative emotions and feelings individuals experience is directed towards the nearest manager (Mathews, 1982; Morrison & Nolan, 2007). Additional problems occur in practice when managers hold historical stereotypical assumptions on the lack of value of the older workers knowledge has in the workplace (McGregor, 2005; Slagter, 2007; Trew & Waytt Sargent, 2000). The attitudes of the nearest manager impacts on the quality of knowledge transfer (Benson & Brown, 2007). The question that remains open for debate is: 'How can valuable knowledge be managed or tacit knowledge captured when managers themselves do not understand knowledge components and how they interact?'. This problem is particularly relevant to this study because research literature has not yet agreed on how explicit interacts with tacit, nor on definitions of tacit knowledge.

The reviewed literature does not agree on a definitive description of what tacit knowledge is. For the purposes of this study the varying definitions have summarised tacit knowledge as life-long experiential learning that has been internalised in a personal manner dependent on each individual's background and experiences. Some

authors believe that 70-90% of knowledge is transferred through informal social interaction (Alonderiene, Pundziene, & Krisciunas, 2006; Plesk, Bibby, & Whitby, 2007), and that up to 90% of knowledge is held as tacit knowledge (Alonderiene, Pundziene, & Krisciunas, 2006; De Long, 2004). Literature also concluded that individuals themselves are not aware of the amount of knowledge they hold, nor the value of that knowledge (de Heus & Messick, 2004; Lines et al., 2005). The question of this study has an underlying problem to solve – to what degree are individuals aware of their tacit knowledge and how they utilise this valuable asset within the workplace context.

Tacit knowledge is held deeply in the minds of people and is virtually impossible to make explicit. People recognised as holding valuable tacit knowledge are implicitly recognised by others who go to them to ask questions and by trusting the judgements made by those people (Leonard & Swap, 2005). Polanyi provides a strong argument that tacit knowledge forms the basis of all knowledge development. It is in the practice of constant problem solving that knowledge moves from the tacit to the explicit (Jha, 2002; Leonard & Swap, 2005; Polanyi, 1959, 1962). Other authors follow a similar view, but limit their descriptions to ‘continuums’ (Alonderiene, Pundziene, & Krisciunas, 2006) or ‘spirals’ of knowledge development (Nonaka, Toyama, & Konno, 2000) – a view this researcher believes restricts understanding in practice because they infer there is a starting point and a finishing point to knowledge development.

Irrespective of definitions of tacit knowledge it is critical that individuals are willing to participate in knowledge sharing activities (McAdam, Mason, & McCorry, 2007; Pyoria, 2007). The workplace conditions that are most favourable to knowledge sharing are:

- to be recognised as holding an individualised tacit knowledge resource (Karsten, 2006);
- for managers to provide an environment that is informal, trusting, with conflict resolved (Morrison & Nolan, 2007; Sias et al., 2004);
- to feel secure and safe, and are valued (Balkin & Richebe, 2007; d'Aspremont, Bhattacharya, & Gerard-Varet, 1998);

- Social interactions are positive and knowledge exchange activities are reciprocal (Blau, 1964; Ekeh, 1974; Greenberg, Ashton-James, & Ashkanasy, 2007).

Negative social interaction and conflict are often intertwined. Nevertheless, conflict often stimulates a re-evaluation of an individual's sense of fairness within their psychological contract, a sense of lowered status and lowered self-esteem. If the perceived breach of fairness is serious enough, there can be significant consequences for the business, such as withdrawal of knowledge or departure from that workplace (McElroy, Seta, & Waring, 2006).

This study is focussed on an exploration of older women's tacit knowledge because the historical undervaluing of women's knowledge (Brown, 1994; McGregor, 2008, 2005; McGregor & Fountaine, 2006) and the additional barriers historical gendering of workplaces, stereotypical attitudes and discrimination remain in existence (McGregor, 2008). Additional problems impacting older women have arisen through a disjointed career pathway, and the struggle to transition from an external locus of control to an internal locus of control. These issues are important to explore from the perspective of older women to find out whether the above problems create any barriers for the participants of this study.

This dissertation does not argue that men's knowledge and women's knowledge are different, rather that historical conditions exist in society that created negative assumptions about the value of women's knowledge. Secondly, this dissertation does not intend to make a generalisation that the following relates to all women, but that research on women in the workplace commonly describes problems that do exist for some women restrict opportunities for them to develop their knowledge and advance in the workplace.

The question of this study has an underlying question to resolve – to what degree are older women aware of their tacit knowledge and how they utilise this valuable asset within the workplace context. The women of interest are between the age 45-70 years. This age group is the focus of this study because research states that older women face additional barriers in the workplace that constrain their opportunities for developing a career and life internal locus of control. Historical attitudes have created gendered jobs and workplace cultures, negative stereotypical attitudes, discrimination

against older women that have meant the majority of women of interest to this study, remain over-represented in low paid, low skilled, and/or low management positions.

In pursuit of answers to the question of this study, ten women were interviewed and their responses analysed and interpreted to identify common themes on the understanding and utilisation of their tacit knowledge in the workplace. The importance of understanding how women perceived their tacit knowledge and how they make decisions whether or not to share that knowledge is not only important for this study, but also critical to developing awareness in the value and utilisation of tacit knowledge for individual workers and managers. The exploration of this question will seek some answers as to how older women understand, value and utilise their tacit knowledge in the workplace.

1. Are women aware of the concept of tacit knowledge as the accumulation of their life long experiences?
2. What value do women attribute to their tacit knowledge?
3. When and how do women utilise their tacit knowledge in the workplace context?
4. What are the conditions that influence decisions women make on when, where or with whom they will share their tacit knowledge?

The following section will describe the methodological approach taken in the pursuit of this inquiry.

3. CHAPTER THREE: METHODOLOGY

3.1 Introduction

The intention of this study is to add to contemporary management research and increase the understanding of a component of women's decision-making processes that stimulate the sharing of tacit knowledge by women for the benefit of others. Rather than pre-supposing hypotheses based on a construction of data around assumptions, this research was actioned with an inductive intention to identify emerging themes from the subjective primary data.

The intervening question is framed as 'what are the conditions that influence women's decisions on sharing their knowledge in the workplace'. The importance of this question has not been directly addressed by literature. It is critical for managers and individuals to enhance their understanding of tacit knowledge so each can learn to place value on this resource and then proactively work towards processes for recognition and utilisation in a meaning way. The secondary questions were developed to provide answers to this question are described below.

- Tacit knowledge is a complex and intangible concept. To what degree do women have an understanding of what tacit knowledge is?
- The value of tacit knowledge is not able to be measured, nor has it been clearly identified in literature. How do women value their tacit knowledge?

Consequently, this researcher avoided prompting as much as possible so as to achieve appropriately personalised responses. Listening attentively to responses was the key goal for this researcher and identifying critical gaps that would require additional discussion as the interviews progressed. The process of the methodological approach used to gather appropriate primary data is now described in detail.

3.2 Research Approach

The exploration into the question of this study was drawn from the ontological philosophy of constructivism (Bryman & Bell, 2003). The question of 'what are the conditions that influence decisions made by older women on the value and utilisation of their tacit knowledge in the workplace' has arisen from this researcher's deep concern that objectivist approaches in research and practice are not succeeding in

developing a meaningful understanding of knowledge management problems. The research paradigm was utilised to gain an in-depth insight into the subjective realities of women in the workplace. It is framed around the belief that while individuals may acknowledge the wider organisational, cultural and systemic properties within a company, they continually interact with the influence of the organisational world (Bryman & Bell, 2003) by displaying negative behaviours and constraining feelings and emotions that inhibit knowledge sharing activities.

This dissertation did not originate from specific propositions but follows the process of iterative thematic analysis of subjective data. Subjective data is information gathered from individual participants who communicate descriptions of experiences and situations from their own perspective. The process of iteration means that themes emerging from data are constantly coded and recoded, compared and analysed until saturation of themes occur. Individuals that are encompassed in participating in the same or similar experiences and situations can provide descriptions of that experience in many different ways according to their own beliefs and values. The descriptions are therefore subjective – described as relevant to each individual at that particular point in time (Bryman & Bell, 2003). Subjective data is then interpreted by the researcher based on the interview data plus the accompanying body language and verbal tones provided by the interviewee.

Subjective data is gathered within an interpretive epistemological philosophy. The interpretive epistemological approach is appropriate to the collection of rich and meaningful information that reflects experiences of participants on a topic about which there is little known. Interpretivism respects the differences between people and requires the researcher to grasp the underlying meaning of social interaction (Bryman & Bell, 2003). As such, this qualitative study was concerned with capturing multiple subjective realities (Prasad, 2005, p. 8) of a sample of women participating in the paid workforce. Interpretive thematic analysis of data highlighted commonalities between responses that have not yet been identified in literature or acknowledged in practice. The methods used in this dissertation seek to access a rich source of information from which to explore the research questions.

3.3 Method

The iterative nature of data collection and analysis provided a rich source of information from which to explore the research questions. In this study, identifying the connections between primary data and literature ideologies was cyclic in nature. This section will outline research methods implemented for the collection and analysis of data.

3.3.1 Sample

The selection of sample participants does not embody a statistical representation, but takes an explorative approach to data gathering. Primary data was collected from a sample of women aged 45-70 years, who volunteered through snowball sampling (Bryman & Bell, 2003). The researcher did not have prior knowledge of who would offer to participate nor how many women would be interested in participating. However, the importance of using snowball selection meant that the sample would purposefully self-select and be pre-disposed to sharing their perceptions. Participants were initially drawn from a known resource of relevant women who had previously shown an interest in the questions of this research.

The first three participants who volunteered to be interviewed, then referred friends to the researcher who requested to be included in the interviews. The interest shown by women was conveyed to this researcher by some as a positive opportunity to share experiences and by others as being pleased that it is an important topic to be explored. Other women known to the researcher that did not match the sample criteria talked to their friends and two more volunteers were selected. Women were further selected by the researcher based on achieving a reasonable variation of age, job type, and the condition of currently working in full or part-time paid employment. The selection criteria of 'paid employment', was chosen to help refine the research inquiry in this relatively small study. Women 45-70 years were selected as the sample group for a number of reasons:

- the selection criteria of women over 45-70 years old is supported by past research as a cohort differentiated by career stage, a disrupted career pathway because of family commitments, an historical undervaluing of knowledge within a masculine society, age discrimination and stereotypical attitudes

- there is a lack of research on women 45 years and older in the workplace context particularly relating to their knowledge
- women remain employed in jobs that are gendered as feminine and underrepresented in private business holding around 7% of senior positions in New Zealand.

Women who participated in the interviews for this study provided a perspective of their experiences from workplaces in Auckland and Hamilton, New Zealand. The geographical convenience to this researcher (based in Auckland) was important to enable recruitment and interviews within the short timeframe available for completion of this dissertation.

3.3.2 Interviews

In-depth interviews were the primary source of data for this dissertation. In-depth interviews are defined as the researcher asking a series of interactive semi-structured and open-ended questions (Bryman & Bell, 2003) that stimulated reflective conversation in order to collect the rich data required (Alvesson & Deetz, 2000). The semi-structured method of interviewing is critical in the creation of an informal environment and for establishing a trusting relationship between the participants and this researcher. The conversational method of interviewing allowed a reflexive and iterative description of situations enabling depth of individualised responses. The duration of interviews was between 30 – 50 minutes. However, before interview the researcher stimulated some conversation to set an informal environment, and after the interview thanked the participant and to ascertain if they were feeling comfortable with the process and outcome of the interview.

Participants were fully informed of the purpose of this study by reading the participant information sheet, reading and signing the individual consent form. Additionally, the researcher discussed the relationship between their input and the research findings, and how the information they chose to share would be utilised and kept anonymous. The interview process commenced with casual discussion within a context that was intended to reduce preconceptions of the researcher's authority or status over the interviewees. Interviews were conducted on a one-on-one basis and were audio recorded for later transcription. The benefit of recording interviews was that this researcher was able to observe additional signals participants exhibited while

they were communicating their thoughts. Participants chose a venue for the interviews that was comfortable, quiet and met their varying needs of confidentiality. Some interviews were held in the interviewer's home, some in the participants' homes and the rest in a meeting room at libraries or office venues. All venues were congruent to participant and researcher requirements.

Developing trust in the research relationship is imperative to the interview process and assisted in capturing responses to some of the questions that stimulated emotional responses. The importance of managing body language signals and verbal cues was important to the integrity of this dissertation. The additional emphasis of body language or tone of voice accompanying verbal responses assisted in a deeper exploration of specific questions and the latter interpretation of data. The researcher took care in selecting and using phrases and body language that did not reinforce participants' responses.

Participants were each given the opportunity to remove any portion of their interview data, or withdraw their data altogether at the end of the interview. Discussion points that deviated from anticipated interview questions were treated with ethical care. For example, when information that was of a highly confidential nature was volunteered, the participants were reassured that data would not be included in the transcript. This researcher used her discretion to remove one section of data from one interview that she considered could contravene privacy of a third party. The participants who had mentioned names were assured identifiers would not be held in any recorded or written records before and after the interviews. All transcribed data was then utilised during the analysis of responses. Interpretation of interviews is relevant to the analysis of qualitative rich data. However, to add to the richness of data, was also important to use comments from the participants supported interpretation and give deeper meaning and value to the women's contribution to this study. Quotes that have been utilised are in particular those that either support or contradict themes identified within the literature review.

Interview data and individual consent in hard and soft forms were stored on the premises of the Business School at the Auckland University of Technology (AUT) under the control of the supervisor of this dissertation, and in a secure place separate from the completed dissertation document. While the responses describe and used in

this dissertation were detailed, all participants will remain anonymous. Interview participants were fully aware of the purpose of their data collection and assured of the confidentiality of their identity. The conditions of confidentiality are congruent to the AUT Ethical Guidelines (2008) approval received by the researcher's supervisor. These guidelines were utilised by this researcher throughout the process of collation of information, primary data, analysis and interpretation of the participants' personal experiences and thoughts.

The anonymity of participants was important to the intent of this research project to assist the researcher to capture and stimulate the integration of highly personal information. In what follows, the participants' names will not be mentioned and have been replaced with pseudonyms.

3.4 Data Analysis

The purpose of this section is to describe the data analysis process. The data analysis framework used in this study was iterative (Bryman & Bell, 2003) and reflective to allow for the inclusion of new data introduced during the interview process. Iteration provided the opportunities for this researcher to reflect on the data as it was collected and make comparisons between theories presented in literature. Interview responses were transcribed verbatim with the exception of excerpts. Words and phrases that were emphasised by either tone of voice or body language were also emphasised within the transcripts so this researcher could include these aspects as part of analysis.

Themes emerged from the primary data analysis were identified using selective coding. Selective coding is the process of identifying the central issue and systematically refining and developing relationships with other categories (Bryman & Bell, 2003). Coding began with the consolidation of broad themes into general categories with consideration of the following (Thorpe & Holt, 2008):

- Transcription of interview data immediately followed the recording of each interview. Early transcription meant that data gathered was fresh to the researcher while reviewing the relevance of questions and emphasis placed on particular statements;
- Coding broad themes began from the first interview transcript to increase understanding of the data and review the relevance of questions and style.

Transcripts in subsequent interviews also provided a format for initial notes from which categories began to take shape.

- Initial coding was fragmented into more detailed fields to gain an insight into the multiple and at times contradictory statements made by participants.

The search for emergent themes is not an objective process in this interpretive study. The researcher was required to make sense of data by creating and applying categories based on her own experiences and knowledge, and pre-existing theory (Balkin & Richebe, 2007; Blau, 1964; Boder, 2006; Busch, Venkitachalam, & Richards, 2008; Ekeh, 1974). Constant comparative analysis dominated the collation of themes embedded within the data as a continuous process. This process moderated the possible loss of emerging concepts of similarity and disparity within response data because of possible pre-suppositions the researcher may have held.

Concepts were developed for firstly using open coding to split data apart and identify data that related to known concepts within literature. Initial categories were those based on the questions asked by the researcher. The results at this level became too detailed making common themes difficult to identify. The second summated step was to bring together items that could be related into broader concepts such as positive and negative experiences, the methods knowledge was either shared or learned, and relationship characteristics with colleagues and managers.

Further manipulation of categories was required when a deeper meaning was sought in the interpretation of data with the additional emphasised body language and tone of voice within the interviews. At this stage it was important to include reflexive interpretation of the events as described by the participants to narrow the emergence of themes. The process of reflexivity exposed and unfolded the underlying meaning of recorded data supported by emphasised words and body language.

Findings are based on explicit responses of women, the developing awareness of tacit understandings of self within interview discussions, and interpretation of emphasis the participants placed on particular phrases or displays of body language that accentuated phrases. Emotional responses were related to both positive and negative experiences and thoughts that were preceded, accompanied or followed verbal responses. While seeking in-depth insights of women's perceptions, this researcher

was aware of the possibility that some women may express an emotional response that fell outside the criteria of this research. This researcher took ethical care in managing ongoing discussion to gain a balance of emotional response in relation to the conditions outlined in the participant information sheet, individual authority form, and the Ethics Approval Application. Interpretation of data was implemented in consideration of the above ethical considerations and is consistent to the ontological and epistemological philosophy underpinning this research project.

3.5 Summary of Methodology

The intention of this study was to explore the subjective realities of older women on how they perceived the value and use of their tacit knowledge. The purpose of the research was to gain an understanding of the conditions that influence decisions on who they share their knowledge with in the workplace. As such, open-ended semi-structured questions were used to encourage the capture of in-depth rich data. The additional indicators of emphasis that were used in the interpretation of data included the respondents' use of body language and tone of voice during interviews.

The sample group were not statistically representative, but were selected through the snowball sampling method. The women voluntarily approached this researcher to participate in the study which added richness to data collection because the women were pre-disposed to sharing personal information. Interviews were held in venues selected by the participants and provided a quite and confidential site where the women felt comfortable in sharing their perspectives. It was important to this study that the participants and researcher interacted within the bounds of an informal and trusting relationship to assist the capture of personal experiences.

Analysis of data followed the iterative thematic coding process with emerging themes subjectively interpreted by the researcher. The literature review exposed common ideologies from research that were integrated within interpretation of data. The iterative process proved highly successful because the opportunity to constantly review a wide range of literature has acknowledged the complexity of understanding the concept of tacit knowledge.

Ethical care was taken to ensure confidentiality of the names of participants and the de-selection of personal data they shared that was not relevant to the question of this study. Interview transcripts will be destroyed on completion of this dissertation and

identifying individual consent forms will be stored in a secure place at AUT separated from the dissertation document. Pseudonym identifiers are used in place of participant names to provide anonymity of participants.

The analysis of data focussed on the question of this study. There were some findings that were predictable when compared with common themes within the literature review. However there are themes outlined within the findings that the researcher were not found within literature – all will be discussed in the following section.

4. CHAPTER FOUR: FINDINGS

4.1 Introduction

The purpose of this study is to inform practising managers and individual women of the importance of paying attention to the valuable tacit knowledge resource held by older women. Interview questions were framed around gathering individualised responses from women between 45-70 years to provide some answers to the question of this study. What are the conditions that influence the decisions made by older women on whether to share their tacit knowledge in the workplace context? Findings are framed around the themes outlined within the literature review. This section will describe the findings in the following sections:

- preferred methods of knowledge transfer
- relationships at work and positive and negative interactions
- awareness and utilisation of tacit knowledge
- generational differences and gendered workplaces.

Anonymity of participants is important. Consequently, each of the ten women interviewed were given a pseudonym. The following gives a brief background to each of the participants with respect to confidentiality of identifying factors.

1. Abby (45-49 year age group) currently works as an IT contractor who is hired on short to mid term contracts to develop software for individual firms. Abby develops the software programmes and trains her client's staff to use the systems.
2. Brenda (45-49 year age group) currently works in full time permanent employment as a software developer for a private firm. She develops the programmes often in collaboration with other staff.
3. Carol is (65-60 year age group) and works on a casual basis as a midwife within the health sector in a large hospital. She would like to retire, but also wishes to continue to earn an income and works 2-3 shifts a week.

4. Donna (45-49 year age group) and employed on a full time permanent basis as a lower level manager working for a government social services department. Donna has progressed at a satisfactory pace (to her) through her career.
5. Evelyn (50-54 year age group) is employed in a full time permanent position in a tertiary education as the employee who gathers information and gives advice for academic complaints procedures. She enjoys her challenging work but also recognises she should be rewarded at a higher level.
6. Francis (60-64 year age group) is employed under the manager level in a full time permanent position in a tertiary institution. She produces a high quality of work and carries out work above and beyond expectations of her role.
7. Gail (50-54 year age group) is employed on a fixed term contract in the banking sector – a job she has returned to after running her own business for a number of years. She brings extensive and broad knowledge back to her current workplace.
8. Hayley (55-59 year age group) works in a full time permanent position as an administration assistant at a private organisation after following a restructuring event at her previous job. She is an experienced administrator.
9. Ina (45-49 year age group) works as a casual or short term employee who has recently experienced a number of employee changes. Her current position is temporary and constrained by an uncertain end-date.
10. Jane (55-59 year age group) works on a part-time casual basis. She had recently returned to work after supporting her partner at work and being the main caregiver of their children. Jane worked in a responsible role at a legal firm prior to committing her time to family responsibilities.

The mixture of participant's job-type, age, and employment status provides a valuable perspective of women across public, private and tertiary sectors for the purposes of

this small study. The following sections provide the background to the emergent themes from data analysis and will follow the structure of the questions outlined above.

4.2 Knowledge Transfer

Participants of the study described several methods they used to share their knowledge. Methods included the ICTs, training sessions, writing manuals and instructions, face to face on-the-job training, and informal conversations within casual social interactions. Abby stated that her tacit knowledge was implicitly captured within ITC systems, but only because her job was to development software programs. Carol and Abby recalled previous occasions of providing mentoring to others. Abby had mentored in an informal manner.

“Part of developing supervisors is to share experiences of having been a supervisor yourself or explaining the same thing from different points of view”.
(Abby)

Carol’s response above showed some belief that her knowledge was not as valued as newer mentors in the workplace. The context of Carol’s body language and expression are interpreted as being because she felt she no longer mentored others because of her age.

“I’m not in any official capacity now, but previously at [company name removed] I used to do my share of mentoring.” (Carol)

Receiving or giving training on-the-job was also mentioned by some women.

“I’ve had people who can’t operate by reading, but by listening and watching, I change to suit the person so I put it in a way that they can understand”. (Donna)

Jane returned to work after many years bringing up her children. She did not begin to share her knowledge until she had grown confidence within her relationships at the workplace.

“I had to find my way first and build a relationship with the person I’m working for before I could do that.” (Jane)

All women preferred the one-on-one method or group learning in an informal and relaxed environment to share their knowledge. These methods allowed open questioning of their instructions from the learner enabling a safe environment for asking questions.

“I like to show as well as tell – I’m a very visual person...I do it the way that I would like to learn” .

“One-on-one is definitely the most...you get the most through, it’s the least threatening, it can be totally confidential.” “...a way of making life easier for the people concerned or helping them understand its not a unique situation.” (Abby)

“I try to teach people how it can be easier. Its about working smarter I guess”. (Gail)

“Basically very informal, not make a big fuss about it, keep it low key and just in general conversation.” (Jane)

“I talk them through it so that they are actually doing it hands-on, so I can see if they can do it. If they are not sure where to go I can say ‘OK, well this is what you do’.” (Francis)

Hayley stated that colleagues of a similar age were more likely to ask questions, while younger colleagues did not appear to be as interested. The judgement of ‘lack of interest’ by young people was based on the absence of questions being asked while receiving instructions. This example was perceived as either that younger people only wanted to know ‘facts’ and then took those facts to make their own pathway, or they were too impatient to listen to the supporting knowledge of ‘why’ the facts shared were important.

“...if they’re much younger than me they tend to grasp it much quicker perhaps...and say ‘yes, yes, I see what to do. Whereas an older person more closer to my age, they’ll absorb it and stay with you much longer.” (Hayley)

Feelings of satisfaction or happiness followed a positive knowledge transfer interaction. The implicit consequence of positive interactions was displayed as a perception of improved status.

Status is related to the level of knowledge empowerment women perceive they hold. Additionally, this level of empowerment is directly related to whether the women possessed an internal or external locus of control. Women working in the IT industry explicitly recognised that they were now in control of their own career pathway. Whereas, the women working as higher level administrators believed their knowledge and skills were underutilised were in transition between the two levels of control and empowerment.

4.3 Positive and Negative Interactions

Participant responses included numerous examples of positive and negative interactions that have influenced their willingness to share knowledge or learn from others. The positive or negative emotions that resulted from these social interactions consequentially stimulated positive or negative behaviour towards others in the workplace. One type of relationship was more commonly mentioned than others – between themselves and their manager(s). It is important to this study to explore this area further in more detail from the perspective of each woman.

Abby expressed her frustration of teaching others how to use an IT system when there were restricted resources and time allowed to include the ‘know how’ instructions alongside the technical information. She felt that the lack of time allowed for passing on her knowledge and the lack of understanding of managers regarding effective learning processes resulted in a limited transfer of tacit learning. While Abby felt in control of her career pathway, this situation resulted in Abby feeling that she was not able to transfer an appropriate depth of learning to those attending training sessions. Jane expressed and displayed emphasis on how the lack of opportunity to share her tacit knowledge impacted on her sense of injustice to the value of her skills within contracts.

However, in previous jobs Abby has learned a lot from managers who would share their knowledge.

“...you learn a lot from managers, or people who are at your colleague level or higher who explain what they want to achieve so you might learn a bit about the business. I learnt a lot by asking questions.” (Abby)

Brenda had experienced negative interactions in previous jobs that included lack of managerial support in developing new systems, competitive and non-sharing behaviours of colleagues, and limited resources for developing new learning opportunities. In a previous position Brenda stopped sharing knowledge because she perceived that her manager felt threatened when she did so.

“I made a conscious decision I wasn’t going to talk about what I knew because I think some people thought it wasn’t my place...how was I supposed to know things like that and because I was like not an HR manager.” (Brenda)

Within her current job Brenda had recently removed herself from a competitive and individualistic work group environment and situated herself within a group that

fulfilled her need for reciprocal information sharing. Brenda believed that in her current position, her intelligence and long term value to the company was recognised by her manager. Through the observation of Brenda's strong control of her body language and positive expressions it is interpreted that she felt in control of her career pathway and her life events.

Quality social interaction and frequent communication between colleagues and managers was critical to Carol who had worked in the health environment for over 20 years. Firstly, re-telling incidents enabled Carol to seek and receive frequent support from colleagues and managers. Group members also reiterated their own negative and positive experiences within the process. Feedback was perceived as supportive and fair. The interpretation of Carol's responses indicated she experienced an implicit understanding that group interactions positively supported the resolution of negative experiences. When Carol did experience conflict, she could remove herself to another work area, or retire.

“There are easier ways than this – there's an easier role. But of course my situation is different to where I can say basically I don't *have* to work.” (Carol)

Carol felt secure and in control of her career pathway and could choose an appropriate time for her imminent retirement. However this air of confidence had not been present at a past part-time position. The manager had consistently 'picked' on her without explaining how tasks could have been done better.

“I was never really able to please her...it was ridiculous, ridiculous and I did miss working there for ages, but there was one example of relationships where I just thought how ghastly if your whole life was spent working with someone like that.”

Donna's environment did not always offer positive management interaction for tacit knowledge sharing. Knowledge transfer that was formally considered to be important was measurable by way of for example, errors versus correct allocations of allowances and number of customer complaints. Immediate managers were often perceived as not helpful and at times jealous of Donna's abilities. She also commented that conflict situations she had experienced were often solved by her because managers did not have a good understanding of workplace events.

“This problem was worse because the manager had just come back from long-term leave and didn't know me. Once she had spoken to another manager of mine she realised it wasn't me causing the problem. She didn't apologise

though. She just said ‘once you get to this level, you will understand the other jobs are just as busy’. I took this as an insult. I didn’t bother arguing with the manager, I didn’t think it was worth it. Other staff were telling me ‘don’t leave, don’t leave, so that made me feel better.’ (Donna)

The underlying meaning from Donna’s responses is that she recognised that her personal empowerment strengthened as her colleagues observed her behaviour. She stated that if she hadn’t received positive support from others she would have left. Donna was in control of her career but worked hard to be recognised.

Gail returned to her previous workplace after a number of years. While holding valuable knowledge, she had to relearn the situational ways of doing things. Her frustration and anger emerged as being related to the ‘new’ competitiveness of the environment with a high frequency of negative interactions.

“If there’s a person that you know no matter what you can offer them, whatever you can say to them to make their job a little easier, if you know that person is not going to accept whatever you say, there’s not point in even making a small suggestion.” (Gail)

Gail felt that colleagues were not interested in helping her, and had the expectation that she should learn by ‘working it out herself’. She has attributed this situation to the possibility that others (mainly younger in age) may have felt threatened by her presence in the workplace. Gail has decided to rely more on people at manager level for support and acknowledgement of her abilities.

“I think more of the managers are coming to me and talking about different things during the lunch break or morning tea. Just kicking around ideas, you know, its quite nice.” (Gail).

The underlying implication of managers sourcing Gail’s knowledge in this very informal manner indicates capture of knowledge without having to acknowledge value to it in any explicit way. She felt a lack of control over her situation commenting that she wondered why she was there. Her body language and tone of voice depicted frustration and bewilderment towards the situation she was in. Gail was not in control of her career events.

Evelyn and Francis undertook work that had previously been carried out by their managers but were experiencing hidden barriers from those managers in proceeding with applications for promotion. The relationship Evelyn had with her manager was positive and friendly, but she was still not being financially recognised for her efforts.

The 'friendly' situation appeared to create a situation where Evelyn felt she should not apply for promotion. Francis' did not feel her relationship with her current was good enough to apply for promotion. This feeling was influenced by a past experience where Francis described a lack of value from her manager

"You know I've gone the extra mile, an extra 10 miles and you never get a word of thanks – you don't even get acknowledgement, someone else [manager] takes the kudos of what you've done." (Francis)

Both were experiencing barriers to applying for promotion through either 'friendly' or 'negative' relationships with their direct managers. Both women were confident of their skills but did not possess any awareness of what tacit knowledge is, nor the value of the tacit knowledge (or power) they held. They wanted to be more in charge of their career destiny, but were not at the level of confidence to proactively seek it.

Hayley felt she was not recognised by her colleagues as being an intelligent and capable person particularly when she made attempts to share her knowledge. She now preferred to learn from manuals and by hands on practice. Although she stated she still enjoyed helping others, she had stopped asking for help because of negative reactions from others. Hayley was in a situation of having lost a sense of control of her career circumstances initiated by a recent redundancy.

"She [younger colleague] explains it very quickly and briefly so I don't really go back for other information because you know it seems I'm interrupting her, or she hasn't got time, or I'm too stupid or old for her to spend time on that sort of thing." (Hayley)

Ina and Jane made comparisons between themselves and others placing themselves as not as able or as valuable as others. Ina's discussion on relationships with managers and colleagues mainly outlined problems. This researcher has interpreted Ina's responses to show she retains historical negative feelings and emotions that she carries with her to each new workplace.

"The main thing that troubled me was their tone – their way of saying things. It lacked any sort of compassion, they're very bossy people. When I was trying to get knowledge from them they just won't tell you, they'll just brush you off and say 'I don't have time now'. Its definitely the tone...really gets my back up." (Ina)

On the other hand, if the conversation was occurring amongst 'friendly' others, Ina viewed the process as a positive experience.

“I never lingered for lunch with people...and I think it does leave you a bit outside the loop. I have found that just staying there they consider you more as one of them.”

Informal conversations were a common method of building relationships in Ina's and Jane's workplaces. Jane focussed her responses on how little she knows. She made comparisons between herself and others she perceived as holding a higher status because of the positions they held or the jobs they carried out. Her responses were accompanied by body language and expressions that are interpreted as apprehensive when speaking about her abilities and knowledge.

“Probably since returning to the workplace I have had limited amount of knowledge, because probably I haven't had the confidence to share because not knowing where I am, or I have felt I could share because of the position of the other person...I felt as though I probably didn't have that much knowledge to share.” (Jane)

Jane did not express any negative feelings or emotions towards anyone within her workplace. She considered herself the person with the least knowledge and therefore perceived the learning was one-way. She did not believe she had anything to offer her colleagues in return. Jane was content with her current career situation.

All women experienced feelings related to positive and negative interactions, and the emotions related to those interactions. Positive interactions meant a continued desire to share knowledge and negative interactions resulted in varying levels of withdrawal of knowledge sharing. Participants expressed the importance of trust when sharing information with one stating that if sharing knowledge is spontaneous, it builds trust in the relationship.

“...you know if someone doesn't have to do something, but they do it anyway, it builds good feelings”. (Ina)

If trust exists, positive interactions developed feelings of satisfaction, pride, enjoyment, and being 'happy' to continue sharing knowledge in the future.

“He came to me afterwards and thanked me for explaining that to him. That made me feel really good then.” (Donna)

While all women initially disclosed examples of positive experiences, the discussion on negative experiences dominated the interview discussion particularly relating to the withdrawal of their willingness to share knowledge.

“I decide who I’ll share it (knowledge) with – if it’s someone I think deserves it I’ll pass it on, but very few seem to.” (Ina)

Ina was not confident of her ability to socialise because of past negative interactions within workplaces. In-depth questioning of past negative situations indicated a belief that the conflict situations were attributed to personality problems of the others involved.

“I’ve found that there’s a certain personality type – three or so people who I’ve had problems with over the past decade or so have all been very, very similar personalities and very different ages.” (Ina)

Negative experiences during knowledge exchange appeared to have a long lasting impact on how participants perceive immediate or potential risk to their professional or emotional safety in the workplace. Ina was affected by the imposed close proximity of a person that she experienced constant negative interactions with to the point she felt sick before entering the workplace.

“My stomach would be in a knot each day and physically, like a ball (making a tight fits on her stomach)...my hair was even falling out at one stage.” (Ina)

Personal risk was associated to two situations. Firstly, to severe negative interactions where the other party was described as a bully, and secondly to the mis-representation or misuse of information they had shared with another person. Betrayal of trust in the relationship was a major issue when knowledge was shared and then manipulated by others.

“Fear would be the biggest one, also anger and frustration...there’s some people you’re scared of or scared that something you know will be taken out of context.”

Donna had prepared a project report in her own time and submitted it to the manager who had taken full credit for the document. This perceived deception resulted in emotions of anger, hurt and of being betrayed.

“... when I realised he took the whole credit for it I was hurt. I just about walked out. When you’ve put the effort in and you’re not recognised for it. It affected me for over six months.” (Donna)

All negative experiences created a desire to exit the workplace of which seven of the ten participants followed through within one year. Two participants from the health and social services field stayed within their larger organisation with a desire to move

to a different role. One of these participants preferred to work around the conflict because she was closer to retirement age and could easily displace herself from conflict.

“I’m not working with one group of people in one enclosed area...I’m frequently working on my own. I just tell myself ‘right well, we don’t have to chat.’” (Carol)

One participant expressed strong emotions of ‘absolute fury’ and ‘hatred’ towards a colleague that was commonly (but silently) considered a bully. The bully behaved very differently towards managers ‘as sweet as pie’, than towards her peers.

“Three quarters of the staff were terrified of her and just sort of avoided her. We all knew it but the managers didn’t.” (Ina)

The major consequence of women working in this negative environment meant that they consciously withdraw varying levels of their knowledge.

“You open yourself up to so many threats, which may or may not exist, and one thing I’m not good at doing is ‘putting myself above the radar’.” (Abby)

Interview data suggested that all of the women worked ‘under the radar’ to varying degrees – some strategically and some implicitly. The most important factor that stimulated women to work in this covert manner was the sense of safety achieved by avoiding criticism and the resulting negative emotions. Once this concept was discussed with the women utilising the implicit method, they showed a conscious ‘awakening’ that they were actually manipulating situations to best suit their preferred way to work. On the other hand, when women worked under the radar there is less likelihood of receiving explicit rewards. This was particularly the case for Abby who developed skills and knowledge covertly within the IT industry as a necessity but also as “part of the thrill” of her career.

4.4 Awareness and Perceptions of Value

Women discussed their experiential tacit knowledge at varying degrees of awareness. Abby and Brenda who worked in the competitive IT industry projected a high awareness of the value of their knowledge and used it as a competitive advantage in the employment market. Abby explicitly recognised her use of communication techniques within relationships as a means of checking the validity of her knowledge:

“I will almost always notate it and validate via discussion to make it real.”
(Abby)

Sharing knowledge occurring in the work places where the women who considered their knowledge as a collective asset for the good of others shows the implicit lack of personalised ownership of knowledge.

“I suppose something like working in medicine its so specific, so probably different than working in an office...I mean there are set reasons and set answers and its not just my reasoning but its all the knowledge behind that.”
(Carol)

Carol and Donna who worked within the public health and social service sector acknowledged their tacit knowledge as an implicit resource in the latter stages of their interviews. They were not used to discussing their knowledge value and initially had some difficulty understanding the concept. When Carol and Donna incrementally developed an awareness, their accounts of how they made use of this knowledge flowed with an increased enthusiasm. This growing awareness also impacted strongly in a positive manner for Jane’s sense of value. The following are two excerpts from firstly early in Jane’s interview, and secondly from the latter stages.

“I haven’t got to the stage of sharing anything because I feel as though that they are more knowledgeable...” (Jane)

“Actually, I’m going to more aware of it [tacit knowledge] now, how I do things, how I talk to people, how I gauge their response...my ability to share...” (Jane)

A similar affect was felt by Evelyn and Francis.

“...Its very interesting though, I didn’t realise there was that differentiation about how I felt about what I knew. Its been interesting (*reflective expression*).”
(Evelyn)

“...and when you get to my age you don’t really realise just how much knowledge you have got tucked up there [pointing to her head]” (Francis)

Hayley and Jane who worked in administration assistant positions had not consciously thought about the value or use their tacit knowledge. They believed that their skills were ‘practical’ and held an implicit belief of a low value of those skills compared with colleagues. Comparison of skills was of importance to their sense of place within a workplace.

“No, I take information from them, I actually haven’t got to the stage of sharing anything because I feel as though that they are more knowledgeable in areas that I am working in.” (Jane)

“... because it just seems I’m interrupting her, or she hasn’t got time, or I’m too stupid or old for her to spend time on that sort of thing.” (Hayley)

Both women were relatively new to their positions which may have influenced their sense of knowledge value and felt they should add value to their knowledge by participating in training courses to upgrade their skills.

Utilisation of Tacit Knowledge

Towards the end of the interview process eight of the participants were more aware of how they utilised their tacit knowledge that correlated to their growing awareness of the value of that knowledge. Abby and Brenda were already highly aware of all facets of their knowledge and were in control of who, what where and when they chose to share with. Abby worked in a highly competitive environment and developed her tacit knowledge in a covert manner.

“I’ve actually flown under the radar to do stuff I wanted to do.” (Abby)

Abby utilised her tacit knowledge explicitly through training staff to use the software she had developed. Brenda utilised her tacit knowledge by situating herself within a reciprocal team environment where she found satisfaction from sharing and learning. Within Brenda’s semi-competitive IT environment she utilises her knowledge by applying her skills to develop products for her employer. Carol and Donna were implicitly aware of the knowledge they held and about mentoring, teaching, and sharing but attributed the utilisation of their knowledge for the public good (benefit in long- and short-term to their clients).

“...how you need to manage the baby and they [parents] probably have learnt some from text books, but this is the actual hands on knowledge of looking after a baby at risk of something like that [hypoglycemia].” (Carol)

“Yes, I’ll put the clients first. So if a case manager is going down the wrong track and the client is getting upset, I’ll step in.” (Donna)

Gail returned to a previous workplace and began working in a manner she was used to by sharing her knowledge and developing suggestions for improvement.

“I’ve been able to offer assistance to the managers there. Just on the way they run their meetings, training systems. I’ve tried to encourage them to have training manuals...if you make a mistake this is the process that needs to be followed.” (Gail)

Evelyn and Francis utilised their skills and knowledge to meet their levels of satisfaction. They read policies and procedures and networked well, built relationships and were focussed on sharing or utilising their knowledge to ensure their responsibilities were achieved above expectations and as smoothly as possible.

“The person who used to do the job before is not good at passing on information in a formal way and what I’ve found is that I’d be doing my job and I’d think ‘I don’t know how to do this’ so I’d go and then ring her up or go and have a coffee.” (Evelyn)

“...do you want me to show you how to do them? ‘Oh, yes please’. She does all her own now.” (Francis)

Evelyn develops written instructions for others to follow in preparation for easier transfer to others. She is well aware of the importance of discussing written information so others gain an understanding of why the instructions are important.

“...so its not just a matter of just following this list of procedures, there’s actually purpose behind it.” (Evelyn)

Hayley and Ina (conditionally) utilised their knowledge when asked for help.

“...if someone might have said does anyone know how to finish off a presentation, or start a presentation”. (Hayley)

“I think when people come to me and want to know about information...I would tell, I think depending on who it was and how they approach me”. (Ina)

Jane has taken a different approach to utilising her knowledge. While she still lacks some confidence of her abilities, she makes changes to improve things ‘under the radar’ to avoid questions from her manager that are perceived as barriers.

“I’ve done it behind the scenes, like gradually change things or written notes or written systems. I’m sort of starting systems going where that hasn’t happened before.” (Jane)

Responses have identified a strong correlation to the level of awareness of tacit knowledge and the perceptions of control and proactive utilisation of that knowledge. This correlation is important to the gap in management literature where there is a strong belief that all components of knowledge can be measured for the benefit of

appropriation. As a consequence, the responses from participant's when asked if they wished to be able to place an explicit measure on their tacit knowledge are important to discuss.

Measuring Tacit Knowledge

The concept of measuring tacit knowledge was introduced to the interview participants. While eight of the women could not comprehend how this measurement could be achieved, Abby and Brenda said that they did measure their tacit knowledge implicitly within their curriculum vitae and by their success rate in being offered positions they had applied for. For example Abby stated:

“I think it is being measured, I think you can measure it in what you do. When people put down years of experience...they put it down as a time and its kind of converted into well, you've had so many years of...” (Brenda)

The ability to explicitly measure their tacit knowledge was not of interest to any of the women with Abby stating she would not want to because it would become a commodity within a competitive male dominated environment.

“I've been a radical feminist for a long, long time and I've made it in the male world and you do that by understanding politics, being intelligent and working hard. One of the ways that men hold their power, *this is my personal belief*, is that if there is a system to exploit and get maximum points from it and its got a measurement on it, the guys will do it first. I think that any system like that would disadvantage women.” (Abby)

In summary, none of the women were interested in exploring or developing explicit methods of knowledge measurement. Additional questions were framed around gathering a perception if participants were aware of the gendering of the workplace and consequences of stereotypical attitudes.

4.5 Age and Gender

Reference to stereotypical attitudes and discrimination were not mentioned by nine participants but were implicitly intertwined within their responses. Hayley frequently mentioned age and suggestions of low intelligence. For example, Jane discussed her low level of knowledge after being away from the workplace bringing up her children, and Carol discussed younger mentors now training new entrants.

Generational differences between the participants and colleagues was not at the forefront of any of the participants responses but were described by three of the participants. While acknowledging differences in learning behaviour between younger and older employees, it was implicitly or explicitly accepted as a generational norm.

“It was a bit frustrating because they saw things so differently and just trying to explain that grammar does matter...”. (Brenda)

“When I’ve asked her for help, she’s much younger, she doesn’t seem to have the, or want to give the time.” (Hayley)

Hayley provided the strongest responses regarding the younger generation that were accompanied by her feelings of being old. In consideration of the accompanying body language during this response, the researcher interpreted her statements as a reflection on comparisons of her own age against others rather than discrimination towards younger colleagues. When asked about her knowledge resource she replied:

“Not very well...I’m loosing my marbles...very fast.” (*laughing*). (Hayley)

Gendered jobs were mentioned by Abby and Brenda who worked in the IT sector. Abby is consciously aware of the competitive and political implications of working within a gendered workplace.

“...but generally I’m extremely tactful and politically sensitive to how I share information and generally I have shared information in such a way that my boss can and often has claimed it as their own knowledge.” (Abby)

Helen expressed a concern about the importance of how she worded questions when asking men for help. She had stopped asking the majority of men in her work area questions following a number of negative responses.

“I’m with a whole bunch of IT people now and they’re not so verbal as other workplaces...so you’ve got to kind of work out your question quite well ‘cos otherwise they’ll think you don’t know what you’re talking about.” (Abby)

The two women who worked in the IT industry (Abby and Brenda) were the only to participants that had made reference to gender issues in the workplace.

Ten women have exposed a valuable insight into the perceptions they held on the understanding and use of their tacit knowledge. Analysis of data concluded that there are differences in women’s perceptions of how they understand and use their tacit

knowledge that were related to the type of job they held and how they perceived their status within each of their workplaces.

4.6 Categories Emerging from Analysis

Four categories of women’s understanding and use of their tacit knowledge have emerged from this study. The following typology outlines a summary of the categories that were identified from the analysis of participant interview data.

Categorisation is supported with some description of common characteristics of each of the roles.

Figure 4: Typology – Emergent Categories

<i>High awareness of TK</i>		<i>High conscious use/value of TK</i>	
<ul style="list-style-type: none"> • High awareness and value of knowledge and skills. • Underutilised in current position. • Lack of effective manager support. • Choices of who, when and what knowledge to share because of past negative experiences. • Intention to exit to find congruent environment. • Lower level manager (female dominated field) 		<ul style="list-style-type: none"> • High conscious awareness of knowledge value and use. • High utilisation of knowledge for own advantage. • Consciously works ‘under the radar’ • Conscious decisions of who, what, when to share. Covert method reinforced by past experiences of negative • Works covertly to avoiding negative interactions. Value confirmed by successful job applications. • Individualised, highly competitive (male dominated field) 	
	C	D	
	A	B	
<ul style="list-style-type: none"> • Low conscious awareness of value and use of tacit knowledge • Lack of professional recognition, low level of confidence. Not confident of value of own knowledge • New to position, or part-time jobs • Perceive self as low status • New conscious awareness of tacit knowledge arose during interviews • Administration assistant roles (female dominated field) 		<ul style="list-style-type: none"> • Low conscious acknowledgment of value of tacit knowledge. • High utilisation of knowledge and confident of abilities. • Working in strong group culture • Group owned knowledge • Sense of status is collectively supported as high • Heightened awareness of personalised tacit knowledge. • Expressed value of discussing tacit knowledge • Public servicing sector (female dominated field) 	
Low awareness of TK		Low conscious use/value of TK	

The typology has been compiled by the researcher. The content within the typology has been drawn from descriptions given by participants and the underlying

assumptions drawn from interpretation of, in particular, emphasised phrases and body language as discussed earlier.

The women had all experienced the four categories over their life times in a dynamic manner. The analysis of data has highlighted a common theme that relates to how the women perceive their status within different workplaces. The categories are now discussed in more detail.

- A: Women who, although had developed significant life experience and work related knowledge, worked in entry level administration positions. Lack of recognition of their knowledge created a sense of low status through social comparison processes that was accompanied by a sense of an external locus of control (sense of being controlled by external influences).
- B: Women who worked in positions and believed their priority role was to ensure knowledge was shared with colleagues because if they didn't, harm may be caused to others (eg, patients/clients). Status was built into the collective framework where there were clear hierarchical lines and cultural behaviours. The sense of status was strongly tied that that of the 'group'. Locus of control was sensed as external, but in reality was a 'collective' internal locus of control.
- C: Women who worked in positions of supervisory or lower level management positions perceived a lack of recognition and under-utilisation of their skills. The lack of recognition and feelings of frustration from not being able to utilise skills created a need to increase their sense of status. These women wanted to move from a sense of an external locus of control (not having control of their pathway), to a sense of an internal locus of control (determining their own pathway).
- D: Women who worked within the highly competitive IT field perceived they held a high level of skills and valuable knowledge. Their sense of status was supported by a strong sense of an internal locus of control. These women had purposefully situated themselves in a position that met their current needs.

Evidence that supports the above categorisation has been discussed earlier in this section. The identified cognitive processes within the psychological contract, social exchange and social comparison were evident throughout the interview data.

Conditions within each workplace environment had influenced how they had perceived their status within those workplaces. However, all but two of the women could attribute any value to their tacit knowledge in the initial stages of the interviews. Women's awareness of their tacit knowledge developed positively towards the end of the interview process. This inadvertent outcome is noted as an important implication for managers and the women themselves as to the importance of quality social interaction for the continual development of knowledge. Consequently, once tacit knowledge was increasingly acknowledged, the women also enhanced their perceptions of value and status.

4.7 Summary

It is important to this study to clarify the conditions that influence women's decisions (explicit or implicit) on whether to share their tacit knowledge. The common influences as outlined below, impact on women at varying degrees which depend on each women's past and current emotional experiences, quality of social interactions, and the degree of an internal or external locus of control. The common influences are:

- The preferred method of knowledge transfer is one-on-one 'hands-on' or reciprocal group interaction that provides an informal and relaxed transaction;
- Negative relationships and conflict in the workplace creates a withdrawal of, or a controlled disbursement of knowledge. The relationship that has the highest level of impact on the women's sense of value is between themselves and their manager(s);
- Women hold varying degrees of awareness of their tacit knowledge, how they utilise that knowledge, and to what degree they attribute value to that knowledge;
- Historical undervaluing of women's knowledge, a self-perception of being old and less valuable, and gendered workplaces continue to affect older women in the workplace.

The four influences outlined above impact women at different times throughout their career pathway, however some women have experienced multiple negative influences within one job. The most important factor to the women is conflict, and a manager

that is unable to resolve that conflict. The complexity of attempts to resolve one or multiple issues are compounded if the relationship with their manager was not supportive. The resulting loss of self-esteem, negative emotions, and feelings of fear and anger, can result in a perceived breach of the conditions of their psychological contract. Outcomes of a perceived breach caused some women to protect themselves from an unfair and judgemental environment. Decisions whether to continue a relationship and the cost/reward ratio within that relationship were actioned. The most common outcome was a withdrawal of sharing knowledge and/or departure from that workplace.

All the women interviewed stated they have left previous workplaces because of negative environments. This finding is important to business as managers attempt to capture and retain knowledge within the business for appropriation. The problem of lost knowledge as older women exit requires attention from managers. A familiar question arises again – how can managers recognise older women’s knowledge if the women themselves don’t recognise what tacit knowledge is or the value of that knowledge.

The findings of this study have identified one major theme that is important for both practicing managers and women in the development and expression of their tacit knowledge. The over-riding theme that has emerged within this study is that women hold varying degrees of awareness of their tacit knowledge. Women working in a more competitive environment had developed an explicit awareness of the value of their tacit knowledge. These women also clearly expressed an explicit understanding of how they utilised their knowledge. Women who held an implicit understanding of the value of their knowledge, but as ‘group owned’ also held an implicit awareness of the value of that knowledge. These women had difficulty attributing a personal value to their knowledge. The women who had little or no understanding of the concept of tacit knowledge, nor that they held knowledge at a tacit level, had difficulty in attributing any value to their resource.

The consequences of the varying degrees of awareness, value and utilisation were underpinned by conditions in the workplace that influenced their decisions whether to share their tacit knowledge for the benefit of others in the workplace. All women wanted to and enjoyed sharing their tacit knowledge within positive social

interactions. However, conditions of the environment and their levels of awareness of their tacit knowledge influenced how much, with whom and what knowledge they shared

The following summarises a critical theme that underpins all of the questions of this study.

Conscious awareness of tacit knowledge	=	Conscious value and utilisation of tacit knowledge
Implicit awareness of tacit knowledge	=	Implicit value and utilisation of tacit knowledge
Lack of awareness of tacit knowledge	=	Lack of awareness of value and how tacit knowledge is utilised

It is important to reiterate at this stage that eight of the ten participants in this study achieved a greater sense of their tacit knowledge towards the end of their interview. The discussion on what tacit knowledge is and how it is utilised and valued enhanced their sense of value and empowerment. Chapter Five will discuss these findings for the benefit of managers in practice and for women to consider in relation to their career development.

5. CHAPTER FIVE: DISCUSSION

5.1 Introduction

Findings of this study have identified important factors that impact on knowledge management in the workplace context. Older women's knowledge is intangible and often hidden because of negative experiences or a lack of quality support from their manager. The purpose of this chapter is to discuss and compare emergent themes drawn from the findings with themes identified in the literature review. The structure of this chapter will follow the outline of the findings and draw on reviewed literature to provide answers to the question of this study.

5.2 Methods of Knowledge Transfer and Capture

Management literature has identified the need for business to capture and utilise knowledge within management systems for the purposes of appropriation (Magnier-Watanabe & Senoo, 2008; Osterloh & Frey, 2000; Smedlund, 2008). However the most common methods proposed to achieve these results are not congruent with perspectives of the participants. ICTs capture data only (Von Krogh, Ichijo, & Nonaka, 2000). One participant said that her tacit knowledge was implicitly captured within ICTs because she developed software. However, when she was training people to use that software she could not transfer her supporting tacit knowledge to the trainees because of the lack of resources allocated to training sessions. The lack of resources meant that only mechanical instructions on how to use the system were transferred.

Mentoring processes had been used by two of the participants in an informal manner but in past positions only. Group mentoring occurred within the public health system where there was a strong emphasis on team support. Literature by Monge and Contractor (2003) has supported this finding. In the health and social services sectors, participants viewed their knowledge as group-owned and able to be shared for the good of clients. The motivation for sharing was to avoid pain or suffering of the end-user (client/patient). Group mentoring practices that are internalised within strong cultures are therefore effective.

The concept of communities of practice (COPs) initially appeared as similar to group mentoring processes, however COPs are expensive to organise, rely on the formal

grouping of team members and is likely to require change strategies. Change strategies frequently upset established communication channels that negatively impact on people's willingness to participate (Brown et al., 2004; Schenkel & Teigland, 2008). Problems can occur within COPs through the limited knowledge held within the group or the negative effect of 'group think'. COPs are also determined as dependent on the quality of the intra-group relationships and therefore the willingness of individuals to share their knowledge under these circumstances. Formalised structures set up for knowledge sharing, such as COPs present problems in particular, for older workers who can be hesitant to share their knowledge if they perceive that once they do, they become redundant. The concept of COPs was not familiar to any of the participants. This method of knowledge transfer did not emerge as a preferred method for the participants of this study, and is therefore not recommended as a stand-alone management tool.

Learning experiences based on a specific and situated need (Darlington & Mulvaney, 2002) were commonly viewed by all women as the most beneficial method of sharing tacit knowledge. One-on-one, situational, learning by doing sessions were preferred and believed to be more successful than all other processes described within the literature review (Ebrahimi, Saives, & Holford, 2008). Participants described this method as the most rewarding and most reciprocated method that they utilised in the workplace. Literature by Handley et al, (2007) supports this finding stating that tacit knowledge transfer occurs most frequently within a climate of situated learning during one-on-one conversation, or from being helped with an immediate problem. This method provides the opportunity for hands-on learning and the freedom for the learner to ask questions in a safe environment. The reciprocal responses experienced by the participants reinforced in-depth transfer of knowledge for the benefit of others. The findings of this study have identified that tacit knowledge is transferred most effectively through a process of one-one-one situational and informal interaction that is supported by the manager(s).

Management literature should increase the focus on informing managers of these critical factors. According to the literature, knowledge is developed through formal (education), non-formal (training) an informal (learning through informal social interaction) events. Literature by Alolnderiene, Pundziene, & Kriscuns (2006) outlined the importance of encouraging informal interaction as a critical knowledge

transfer process. They state that 70-90% of knowledge is transferred within this environment. The findings of this study acknowledge the criticality of developing informal opportunities for transferring tacit knowledge.

The importance of developing a better understanding the components of knowledge and how knowledge is developed is critical to the growth of business. There is a lack of understanding in practice of how knowledge is developed through understanding the components of knowledge. The extant literature describes mainly two components of knowledge that continually interact in the process of creating new knowledge. Polanyi's original works state clearly that tacit knowledge provides the foundation upon which all knowledge is built (Polanyi, 1959, 1962, 1966; Polanyi & Prosch, 1975). This view is supported by recent literature that has either critiqued Polanyi's philosophy or has cited his writings (Greene, 1969; Jha, 2002; Nonaka, Toyama, & Konno, 2000). The researcher agrees with these authors' point of view. In particular, it is the continuous interaction between tacit and explicit knowledge that is stimulated by informal interactions.

Interview responses confirmed the importance of tacit knowledge within the interactive development of all knowledge as discussed earlier (Alonderiene, Pundziene, & Krisciunas, 2006; Harlow, 2008; Polanyi, 1966). All participants acknowledged or realised that their skills and explicit knowledge was based on their life-long learning experiences.

The question raised in the literature was that how can managers know how to capture and utilise knowledge when individual's themselves are not aware of how much knowledge they hold (de Heus & Messick, 2004; Stenmark, 2001). The participants of this study, being aged between 45-70 years, had experienced many years of knowledge development and yet eight of the ten women had not yet recognised their tacit knowledge as a valuable asset. This has significant consequences for those individuals and managers in practice.

One question that arises as a result of this study is how can individuals value their knowledge if they are not aware of how much knowledge they hold. De Long (2004) speculates that up to 90% of knowledge is held as tacit knowledge. Although there is no empirical evidence to support this statement, it does indicate the possible volume of lost knowledge as people exit the workplace. Secondly, this situation has left

individuals who held little or no awareness of the value of their tacit knowledge in a situation where they do not benefit from that asset.

5.3 Awareness and Value Attributed to Tacit Knowledge

Literature has confirmed an historical stereotype of women as having less intelligence than men (Samuelson & Allison, 1994). However, as this study has found, women who are consciously aware of their tacit knowledge value seek positions where they utilise that knowledge in a more career-assertive manner. The implicit result emerging from this finding is that once women have developed an internal locus of control they also manage their careers in a more purposeful manner. The internal locus of control has supported the move away from being inhibited by stereotyped attitudes and the ability to utilise their tacit knowledge competitively (Kim, Shapiro, Aquino, Lim, & Bennett, 2008).

Two women working in the health and social service fields determined their knowledge was owned by all people in their workplace for the benefit of patients and clients. These two women implicitly held an internal locus of control but one that was dependent on the group. They held an implicit sense of status and value from being part of a collective.

The women who were very aware of the value of their abilities, but also felt undervalued, were in transition from external to internal locus of control. They wanted to feel in control of their career pathways but had not yet found the opportunity to do so. On the other end of the continuum are women who did not hold any understanding of what tacit knowledge was. These women also made comparisons of their own value against others in the workplace. One woman was content with her position displayed an internal locus of control through the choices she made, while those in unhappy situations were frustrated and attributed problems to their environment.

Perceptions of value and status were developed through cognitive processes associated with the following cognitive processes.

- a) The psychological contract where the women display significant negative consequences from a perceived breach of trust. For example, when they wrote and presented reports and the manager took credit for work they had done. The

women reacted to past, current and expectations of negative interactions in different ways. Some women actioned a change of workplace and some women removed themselves from close proximity of the negative colleague (English, 2005). Other women had developed their career to positions that meant they had gained total control of choices they made relating to work environments (Lizardo, 2007).

- b) Social exchange activities that were not reciprocal and resulted in feelings of anger or fear. For example, the situation where some women felt victimised by a bully and the manager was not able to resolve the situation. All participants sought reciprocal relationships. Administrative assistants in the first instance sought reciprocity in social relationships with peers (Bowditch & Buono, 2005). When social relationships were positive these women judged their position within the group as strong. If social relationships were negative the women withdrew from the group and were attempting to learn new skills through reading manuals and practicing tasks. The outcome of this withdrawal resulted in feelings of disempowerment.
- c) Social comparison processes where the women consciously measured their knowledge and skills against others (Shapiro, Ingols, & Blake-Beard, 2008) and consequently perceived themselves as not being as valuable as others. Knowledge power developed firstly through the women's self recognition of knowledge they held, and secondly through empowerment within relationships, directly influenced how women perceived their status and its value in the workplace (Hasgall & Shoham, 2008; Samuelson & Allison, 1994; Schneider, 2007; Sveiby, 2007).

The findings of this study have supported the significant influences of the psychological contract, social exchange and social comparison processes as outlined in the sociological and psychological literature. These three cognitive processes have a strong relationship to the participant's decisions of what, how, when and with who they share their knowledge.

5.4 Utilisation of Tacit Knowledge

A common theme was the degree that each woman was aware of 'working under the radar' by strategising the utilisation of their knowledge. Initially this appeared to be

dependent on the level of competitiveness of their work environment and the type of job the women carried out. However, in consideration of all ten interview responses this study has found that each of the women controlled the utilisation of their knowledge in varying ways. The experiences of working in male dominated workplaces moved one woman to protect her knowledge. She developed her knowledge and skills in a covert manner and therefore did not make herself vulnerable to judgements and measurements.

Other participants were unconsciously working under the radar for reasons derived from the three cognitive processes described above. The underpinning reasons were firstly, the fear of receiving negative reactions from colleagues or their manager and secondly, the insecurity of being judged. All women had experienced the need to protect their feelings of safety with a focus on removing themselves from the threat of negative social interactions and the resulting negative emotions (Acker, 2006). Loss of knowledge to employing organisations was activated by nine of the ten participants who said if they were not enjoying their work exited the organisation for a more favourable environment (Walsham, 2001).

5.5 Summary

Women, who form 47% of the New Zealand workforce, remain undervalued in the mainstream masculine organisational structures. The population demographic balloons at the 45 year-plus age group. Women in this age group hold a valuable resource of tacit knowledge that remains untapped. They have faced generations of historical social barriers. Some women still struggle to succeed in their career aspirations, with others having achieved an internal locus of control. A sense of achieving an internal locus of control was accompanied by the recognition of the value of their personal knowledge.

Women who were not consciously aware of their tacit knowledge before the interview process had developed a heightened understanding of its value by the end of the discussion. The researcher inadvertently acted as a change agent relating to how women perceived things. Two of the women interviewed already held the value of their tacit in high regard and treated it as an independent and competitive asset. The concept of career ownership by women is heightened when women develop a high level of awareness of their tacit knowledge power (Anantatmula & Kanungo,

2006). Two women considered their knowledge as important to share because the more they shared and learned their own and others service to the public was improved (Boder, 2006; Maqsood, Walker, & Finegan, 2007). The remaining women who held varying degrees of awareness of their tacit knowledge utilised this asset in ways that correlated to their perceptions of value.

Responses indicated that decisions to share tacit knowledge were greatly influenced by the quality of social interaction between colleagues and managers within the workplace (Magnier-Watanabe & Senoo, 2008). Negative interactions were more often with peers but were compounded when the professional and/or personal relationship between the women and their manager was negative (Balkin & Richebe, 2007; Baumann & Bonner, 2004; Rousseau, 2001). Those women who were experiencing positive relationships with their manager felt an improved sense of fit in their workplace.

Systemic problems relating to power disparities continue to disadvantage women in the workplace (Collins, 2007). When the manager showed a lack of ability to resolve conflict the women felt an increased sense of isolation in the workplace that was compounded if their sense of status was low (Bowditch & Buono, 2005). Managers are a key influence on the knowledge sharing activities of older women.

This research also found that women individually, determined how much knowledge they share, when, and with whom. Some were highly aware of how they managed the creation and diffusion of their knowledge, while others shared their knowledge through implicit actions. These decisions made by the women were influenced by the quality of reciprocity within relationships, the degree of value they explicitly attributed to their tacit knowledge, and how they perceived their status as compared with others. The following chapter will discuss conclusions and recommendations for future research as a next step towards older women's knowledge being valued, and those women increasing their own sense of value and assertiveness, in the workplace.

6. CHAPTER SIX: CONCLUSION

6.1 Conclusions and Recommendations

Management research generally proposes that tacit knowledge is codifiable and is able to be measured. This concept appears to be related to an attempt to provide a closer link between tacit knowledge transfer and the financial performance of the organisation (Boder, 2006; Maqsood, Walker, & Finegan, 2007). The measurement of tacit knowledge has been related to the collective knowledge captured within ICT systems and as measurable outcomes of productivity. Yet for continual knowledge flow to be successful it is dependent on human willingness to participate in the process in an effective manner. Managers do not recognise the value of creating an informal environment that offers opportunities that stimulate the transfer of tacit knowledge from older women to others.

Important to the women, was the quality of the relationship between themselves and their manager. The manager was in a position to provide support and acknowledgement of their value to the workplace. The reviewed literature, however, states that managers do not have the skills to deal with negative interactions within the workplace context. In particular managers are not proficient in resolving conflict which is a significant barrier to knowledge sharing activities. Inherent to negative social interaction are emotional outcomes of cognitive processes that influence continued knowledge flow. The psychological contract, social exchange and social comparison judgements are formed independent of business systems, however, they are strongly related to the quality of social interactions and manager interactions with staff. Conflict that occurs within relationships causes negative emotions that create barriers between people and disrupts knowledge sharing activities. Managers who do not have the ability to resolve conflict become the people who are blamed for the problems employees experience in the workplace. Women's perceptions of status and value are directly influenced by the quality of their relationship with managers and the level of trust within that relationship.

Manager behaviour influenced the social interactions within the workplace. If women perceived that this relationship was negative or their skills and abilities were not valued by their manager, the women expressed a stronger need to withdraw their knowledge from others in the workplace. Negative interactions resulted in the women

deciding to cease interaction with the perceived perpetrator of the conflict and withdrew their willingness to share knowledge or ask questions of that person.

Additional problems are experienced by older women through historical stereotypical attitudes, disrupted career pathways, and a lack of recognition of the valuable tacit knowledge they hold. One exception to this rule emerged from women who considered their knowledge to be public property. These women worked in positions that served the public good and holding back information would mean the public could be harmed. Knowledge in this circumstance was shared freely with conflict being diluted by mutually supportive group support. Knowledge within the public good work places was determined as valuable but also as a collective resource. Individual measurement (and therefore individual recognition) of one person having more knowledge than another was not part of the workplace culture.

While some women were more consciously aware of their tacit knowledge capacity than others, and they controlled the utilisation of that knowledge in varying degrees of awareness, they did not want to explicitly measure their tacit knowledge. The findings of this dissertation have determined that in this small sample of participants, women understood, valued, and utilised their tacit knowledge in a manner that strongly correlated with their degree of awareness of tacit knowledge. Secondly, women controlled what, how much, and with whom they will share their tacit knowledge to varying degrees of consciousness. This action was directly linked with their degree of awareness of tacit knowledge. The method that each woman chose to utilise their tacit knowledge was not observable or measurable. Unfortunately, this situation results in reconstruction of the problem that women's knowledge is not valued within the masculine structure of workplaces.

Recommendations

- Managers increase their positive interactions with older women in the workplace. Instead of introducing data collection systems, they should develop informal environments to allow frequent positive interaction. There is a clear indication within this research that many managers do not have the skills to resolve conflict in the workplace. The negative consequences resulting from unresolved conflict disrupt the interactive process of tacit-explicit knowledge development.

- Individual women are recommended to take the time to form reciprocal relationships within which they are comfortable discussing the concept of tacit knowledge and the value of that knowledge they hold. Once this value is recognised, the process of valuing their contribution to the workplace will become more observable and therefore demand better recognition.

The important message to managers and women is, create informal social activities that are safe environments to discuss what you know, learn what others know, and begin to understand the value of that highly valuable tacit knowledge resource held in the minds of older women.

6.2 Contribution of the Research

The findings of this small qualitative study have ascertained that women can develop an improved understanding of their tacit knowledge through more frequent discussion on the value and utilisation of their tacit knowledge. Business practises and manager activities do not promote this understanding within the work environment. The successful method of enhancing tacit knowledge development is to formulate practices that bring senior women together to discuss issues that impact on their tasks and learning activities.

This research has identified some questions for further research. How can managers establish an appropriate environment that stimulates participation in knowledge development activities by older women? How can tacit knowledge be managed or measured when the holders of that knowledge are not aware of the quantity or the value of that knowledge they hold deeply in their minds? The topic of this study is timely and relevant to women, particularly because of the continuing concern that women's knowledge resource is undervalued and underutilised. This study investigated perceptions older women held on the valuing and use of their tacit knowledge to date. This specific question has attracted little attention in research to date.

This study was limited in size and scope but was appropriate to fulfil the completion criteria for the dissertation paper. It provides a situational 'snap shot' of tacit knowledge from the perspective of ten women. Data collected for this study was limited to volunteers and was dominated by women in the 45-50 year age group. A future longitudinal study is recommended to ascertain the changes that occur in the

perceptions of value and utilisation of women's tacit knowledge at interludes over a period of years that will provide regular opportunities to monitor any changes in their perceptions and should involve more women within the age group of 55-70 years old to gain a better balance of data collection throughout the sample cohort. Additionally, future research is required within non-masculine workplaces to ascertain if the findings of this study can be related to a broader audience.

In conclusion, this study has investigated the gap between management systems that were espoused in the reviewed literature as successful knowledge management processes. On the other hand, it was identified that many managers did not have the skills or abilities to understand how knowledge is developed let alone managed. Older women were interviewed to gain a perspective of conditions that influence how they understood, utilised and valued their tacit knowledge. There were three important implications that emerged that are critical to practice.

Significant gaps emerged between the processes used in business to manage knowledge, the manager's ability to manage people, and how older women perceived an environment that is appropriately safe to support the stimulation of knowledge sharing activities. The literature review identified a gap between management practises and the reality of negative influences that impact on decisions older women make whether to share their knowledge. In contrast to the proposed management systems, older women prefer reciprocal one-on-one or informal group interaction as successful methods of knowledge transfer. Two main implications for practice are described below.

1. Managers who do not possess the ability to resolve conflict quickly compound historical problems for older women in the workplace. It is critical that the frequency of negative social interaction is reduced so that quality knowledge transfer activities increase knowledge flow. Managers must understand how knowledge is developed and establish an informal and reciprocal environment that stimulates the development and sharing of tacit knowledge.
2. Older women must engage with each other to discuss and develop a deeper understanding of their tacit knowledge so as to develop an awareness of the value and a more assertive utilisation of that resource.

Consequently, tacit knowledge remains elusive and intangible. The level of awareness of tacit knowledge as understood by each woman correlated with the level of value each attributed to that knowledge. Individuals need to recognise and value their tacit knowledge. The researcher believes that the issues this study has investigated will not be solved until women recognise the value of their experiential tacit knowledge resource and are more assertive in the workplace regarding the value of that resource.

REFERENCES

- Acker, J. (2006). Inequality regimes: Gender, class, and race in organizations. *Gender & Society, 20*(4), 441-464.
- Alonderiene, R., Pundziene, A., & Krisciunas, K. (2006). Tacit knowledge acquisition and transfer in the process of informal learning. *Problems and perspectives in management, 4*(3), 134-145.
- Alvesson, M., & Deetz, S. (2000). *Doing critical management research*. London: Sage Publications Ltd.
- Anantatmula, V., & Kanungo, S. (2006). Structuring the underlying relations among the knowledge management outcomes. *Journal of Knowledge Management, 10*(4), 25-42.
- Andriessen, D. (2007). Designing and testing an OD intervention: Reporting intellectual capital to develop organizations. *The Journal of Applied Behavioral Science, 43*(1), 89-107.
- Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. *Journal of Knowledge Management, 7*(1), 64-78.
- Armstrong, N., Briar, C., & Brooking, K. (Eds.). (1992). *Women & work conference: directions and strategies for the 1990s*. Palmerston North: Massey University.
- Balkin, D., & Richebe, N. (2007). A gift exchange perspective on organizational training. *Human Resource Management Review, 17*(1), 52-62.
- Baumann, M. R., & Bonner, B. L. (2004). The effects of variability and expectations on utilization of member expertise and group performance. *Organizational Behaviour and Human Decision Processes, 93*, 89-101.
- Belenky, M. F., Clinchy, B. M., Goldberger, N. R., & Tarule, J. M. (1986). *Women's ways of knowing* (10th Anniversary ed.). NY: BasicBooks.
- Benson, J., & Brown, M. (2007). Knowledge workers: what keeps them committed; what turns them away. *Work, Employment and Society, 21*(1), 121-141.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Boder, A. (2006). Collective intelligence: a keystone in knowledge management. *Journal of Knowledge Management, 10*(1), 81-93.
- Bowditch, J. L., & Buono, A. F. (2005). *A primer on organizational behaviour*. New Jersey, USA: John Wiley & Sons, Inc.
- Brown, D. J., Ferris, D. L., Heller, D., & Keeping, L. M. (2007). Antecedents and consequences of the frequency of upward and downward social comparisons at work. *Organizational Behavior and Human Decision Processes, 102*, 59-75.
- Brown, J. S., Denning, S., Groh, K., & Prusak, L. (2004). *Storytelling in organizations: why storytelling is transforming 21st century organizations and management*. Oxford: Elsevier Butterworth-Heinemann.
- Brown, R. (1994). Knowledge and knowing. *Science Communication, 16*(2), 152-165.
- Bryman, A., & Bell, E. (2003). *Business research methods*. New York: Oxford University Press.
- Busch, P., Venkitachalam, K., & Richards, D. (2008). Generational differences in soft knowledge situations: status, need for recognition, workplace commitment and idealism. *Knowledge and Process Management, 15*(1), 45-58.
- CEDAW Report. (2002). *The status of women in New Zealand 2002* (No. 5). Wellington: Ministry of Women's Affairs. www.mwa.govt.nz
- Collins, H. (2007). Bicycling on the moon: collective tacit knowledge and somatic-limit tacit knowledge. *Organization Studies, 28*(2), 257-262.

- Cote, S., & Morgan, L. M. (2002). A longitudinal analysis of the association between emotion regulation, job satisfaction, and intentions to quit. *Journal of Organizational Behavior*, 23(8), 947-963.
- Crotty, M. (1998). *The foundations of social research*. London: Sage Publications.
- d' Aspremont, C., Bhattacharya, S., & Gerard-Varet, L.-A. (1998). Knowledge as a public good: efficient sharing and incentives for development effort. *Journal of Mathematical Economics*, 30, 389-404.
- Darlington, P. S. E., & Mulvaney, B. M. (2002). Gender, rhetoric, and power: toward a model of reciprocal empowerment. *Women's Studies in Communication*, 25(2), 139-172.
- Davies, L., & Jackson, N. (1993). *Women's labour force participation in New Zealand: the past 100 years*. Wellington: Social Policy Agency: *Ropu Here Kaupapa*.
- de Heus, P., & Messick, D. M. (2004). Dynamics of trust and trustworthiness in large groups. In R. Suleiman, D. V. Budescu, I. Fischer & D. M. Messick (Eds.), *Contemporary psychology on social dilemmas* (pp. 127-154). Cambridge: University of Cambridge.
- De Long, D. W. (2004). *Lost knowledge: confronting the threat of an aging workforce*. Oxford; New York: Oxford University Press.
- Domagalski, T. A., & Steelman, L. A. (2007). The impact of gender and organizational status on workplace anger expression. *Management Communication Quarterly*, 20(3), 297-315.
- Dwyer, M. (2008). *Critical issues for New Zealand women's employment, now and the future*. Wellington: Department of Labour.
- Ebrahimi, M., Saives, a.-L., & Holford, W. D. (2008). Qualified ageing workers in the knowledge management process of high-tech businesses. *Journal of Knowledge Management*, 12(2), 124-140.
- Ekeh, P. (1974). *Social exchange theory: the two traditions*. London: Heinemann.
- Ellis, J. B. (2007). Psychological contracts: does work status affect perceptions of making and keeping promises? *Management Communication Quarterly*, 20(4), 335-362.
- Ely, R. J. (1995). The power in demography: women's social construction of gender identity at work. *Academy of Management Journal*, 38(3), 589-634.
- English, L. M. (2005). Narrative research and feminist knowing: a poststructural reading of women's learning in community organizations. *McGill Journal of Education*, 40(1), 143.
- Eucker, T. R. (2007, Mar/Apr 2007). Understanding the impact of tacit knowledge loss: defining implicit knowledge and why explicit knowledge=information. *Knowledge Management Review*, 10, 10-13.
- Fawcett, D. L. (2002). Mentoring - what it is and how to make it work. *Association of Operating Room Nurses, AORN Journal*, 75(5), 950-954.
- Foos, T., Schum, G., & Rothenberg, S. (2006). Tacit knowledge transfer and the knowledge disconnect. *Journal of Knowledge Management*, 10(1), 6-18.
- Goodman, P. S., & Haisley, E. (2007). Social comparison processes in an organizational context: new directions. *Organizational Behavior and Human Decision Processes*, 102, 109-125.
- Gray, L., & McGregor, J. (2003). Human resource development and older workers: stereotypes in New Zealand. *Asia Pacific Journal of Human Resources Management*, 41(2), 338-353.

- Greenberg, J., Ashton-James, C. E., & Ashkanasy, N. M. (2007). Social comparison processes in organizations. *Organizational Behavior and Human Decision Processes*, 102, 22-41.
- Greengard, S. (2002). Moving forward with reverse mentoring. *Workforce*, 81(3), 15.
- Grene, M. (Ed.). (1969). *Knowing and being: essays by Michael Polanyi*. London: Routledge & Kegan Paul Ltd.
- Haines, E. L., & Kray, L. J. (2005). Self-power associations: the possession of power impacts women's self-concepts. *European Journal of Social Psychology*, 35, 643-662.
- Handley, K., Clark, T., Fincham, R., & Sturdy, A. (2007). Researching situated learning: participation, identity and practices in client-consultant relationships. *Management Learning*, 38(2), 173-191.
- Harlow, H. (2008). The effect of tacit knowledge on a firm performance. *Journal of Knowledge Management*, 12(1), 148-163.
- Hasgall, A., & Shoham, S. (2008). Knowledge processes: from managing people to managing processes. *Journal of Knowledge Management*, 12(1), 51-62.
- Henry, P. (2003). Occupational status and a gradient of perceived limitations. *Journal of Sociology*, 39(2), 165-177.
- Holmes, J. (2006). *Gendered talk at work*. Oxford: Blackwell Publishing.
- Jha, S. R. (2002). *Reconsidering Michael Polanyi's philosophy*. Pittsburgh: University of Pittsburgh Press.
- Kaplin, H. B. (2006). Self theory and emotions. In J. E. Stets & J. H. T. Turner (Eds.), *Handbook of the sociology of emotions*. New York: Springer Science+Business Media, LLC.
- Karsten, M. F. (Ed.). (2006). *Gender, race, and ethnicity in the workplace: issues and challenges for today's organizations* (Vols. 2). Westport, USA: Praeger Publishers.
- Keating, L. (2002). Women mentoring women: the rewards of giving. *Women in Business*, 54(1), 28.
- Kim, T.-Y., Shapiro, D. L., Aquino, K., Lim, v. K. G., & Bennett, R. J. (2008). Workplace offense and victims' reactions: the effects of victim-offender (dis)similarity, offense-type, and cultural differences. *Journal of Organizational Behavior*, 29, 415-433.
- Kivetz, Y., & Tyler, T. R. (2007). Tomorrow I'll be me: the effect of time perspective on the activation of idealistic versus pragmatic selves. *Organizational Behavior and Human Decision Processes*, 102, 193-211.
- Lawler, E. J., & Thye, S. R. (2006). Social exchange theory of emotions. In J. E. Stets & J. H. Turner (Eds.), *Handbook of the sociology of emotions* (pp. 295-320). New York: Springer Science+Business Media, LLC.
- Leahey, E. (2006). Gender differences in productivity: research specialization as a missing link. *Gender & Society*, 20(6), 754-780.
- Leonard, D., & Swap, W. (2005). *Deep smarts: how to cultivate and transfer enduring business wisdom*. Boston: Harvard Business School Press.
- Lines, R., Selart, M., Espedal, M., & Johansen, S. T. (2005). The production of trust during organizational change. *Journal of Change Management*, 5(2), 221-246.
- Lizardo, O. (2007). "Mirror neurons," collective objects and the problem of transmission: reconsidering Stephen Turner's critique of practice theory. *Journal for the Theory of Social Behaviour*, 37(3), 319-350.
- Magnier-Watanabe, R., & Senoo, D. (2008). Organizational characteristics as prescriptive factors of knowledge management initiatives. *Journal of Knowledge Management*, 12(1), 21-36.

- Maqsood, T., Walker, D., & Finegan, A. (2007). Extending the "knowledge advantage": creating learning chains. *The Learning Organization*, 14(2), 123-141.
- Mathews, K. A. (1982). Psychological perspectives on the type A behaviour pattern. *Psychological Bulletin*, 91, 293-323.
- McAdam, R., Mason, B., & McCory, J. (2007). Exploring the dichotomies within the tacit knowledge literature: towards a process of tacit knowledge in organizations. *Journal of Knowledge Management*, 11(2), 43-59.
- McElroy, T., Seta, J. J., & Waring, D. A. (2006). Reflections of the self: how self-esteem determines decision framing and increases risk taking. *Journal of Behavioral Decision Making*, 20, 223-240.
- McGregor, J. (2008). *New Zealand Census of women's participation 2008*. Retrieved from <http://www.hrc.govt.nz>.
- McGregor, J. (Ed.). (2005). *Lifeswork: celebrating older workers in New Zealand*. Wellington: Dunmore Publishing.
- McGregor, J., & Fountaine, S. (2006). *New Zealand Census of women's participation 2006*. Retrieved from www.hrc.govt.nz.
- Middents, G. J. (1990). Psychological perspectives on enemy making. *Organization Development Journal*, 27, 44-48.
- Miller, D. L., & Karakowsky, L. (2005). Gender influences as an impediment to knowledge sharing: when men and women fail to seek feedback. *The Journal of Psychology*, 139(2), 101-118.
- Moerbeek, H., & Need, A. (2003). Enemies at work: can they hinder your career? *Social Networks*, 25, 67-82.
- Monge, P. R., & Contractor, N. S. (2003). *Theories of communication networks*. New York: Oxford University Press, Inc.
- Morrison, E. W., & Vancouver, J. B. (2000). Within-person analysis of information seeking: the effects of perceived costs and benefits. *Journal of Management* 26(1), 119-137.
- Morrison, R. L., & Nolan, T. (2007). Negative relationships in the workplace: a qualitative study. *Qualitative Research in Accounting & Management*, 4(3), 203-221.
- Nonaka, I., & Nishiguchi, T. (Eds.). (2001). *Knowledge emergence: social, technical, and evolutionary dimensions of knowledge creation*. New York: Oxford University Press, Inc.
- Nonaka, I., Toyama, R., & Konno, N. (2000). SECI, ba and leadership: a unified model of dynamic knowledge creation. *Long Range Planning*, 33, 5-34.
- O'Neil, D. A., & Bilimoria, D. (2005). Women's career development phases: Idealism, endurance, and reinvention. *Career Development International*, 10(3), 168-193.
- O'Neil, D. A., Bilimoria, D., & Saatcioglu, A. (2004). Women's career types: attributions of satisfaction with career success. *Career Development International*, 9(5), 478-500.
- Osterloh, M., & Frey, B. S. (2000). Motivation, knowledge transfer, and organizational forms. *Organizational Science*, 11(5), 538-550.
- Park, J., Pringle, J., & Tangri, S. (1995). *New Zealand women's life paths study: report from mid-life*. Auckland: University of Auckland.
- Perry, E. L., & Finkelstein, L. M. (1999). Toward a broader view of age discrimination in employment-related decision: a joint consideration of organizational factors and cognitive processes. *Human Resource Management Review*, 9(1), 21-49.

- Plesk, P., Bibby, J., & Whitby, E. (2007). Practical methods for extracting explicit design rules grounded in the experience of organizational managers. *The Journal of Applied Behavioral Science*, 43(1), 153-170.
- Polanyi, M. (1959). *The study of man: the Lindsay Memorial lectures*. London: Routledge & Kegan Paul Ltd.
- Polanyi, M. (1962). Tacit knowing: its bearing on some problems of philosophy. *Review of Modern Physics*, 34(4), 601-616.
<http://www.missouriwestern.edu/orgs/polanyi/mp-transcend.htm>
- Polanyi, M. (1966). *The tacit dimension*. London: Cox & Wyman Ltd.
- Polanyi, M., & Prosch, H. (1975). *Meaning*. Chicago: University of Chicago.
- Prasad, P. (2005). *Crafting qualitative research: working in postpositivist traditions*. New York: M E Sharpe, Inc.
- Pyoria, P. (2007). Informal organizational culture: the foundation of knowledge workers' performance. *Journal of Knowledge Management*, 11(3), 16-30.
- Rousseau, D. (2001). Schema, promise and mutuality: the building blocks of the psychological contract. *Journal of Occupational and Organizational Psychology*, 74(4), 511-541.
- Samuelson, C. D., & Allison, S. T. (1994). Cognitive factors affecting the use of social decision heuristics in resource-sharing tasks. *Organizational Behaviour and Human Performance*, 58, 1-27.
- Schalk, R., & Roe, R. E. (2007). Towards a dynamic model of the psychological contract. *Journal for the Theory of Social Behaviour*, 32(2), 165-182.
- Schenkel, A., & Teigland, R. (2008). Improved organizational performance through communities of practice. *Journal of Knowledge Management*, 12(1), 106-118.
- Schienenman, S. (2006). Anger. In J. E. Stets & J. H. Turner (Eds.), *Handbook of sociology of emotions* (pp. 493-515). New York: Springer Science+Business Media, LLC.
- Schneider, U. (2007). Coping with the concept of knowledge. *Management Learning*, 38(5), 613-633.
- Schwartz, F. (Ed.). (1891). *Scientific thought and social reality: essays by Michael Polanyi* (Vols. VIII). New York: International Universities Press Inc.
- Shapiro, M., Ingols, C., & Blake-Beard, S. (2008). Confronting career double binds: implications for women, organizations, and career practitioners. *Journal of Career Development*, 34(3), 309-333.
- Sias, P. M., Heath, R. G., Perry, T., Silva, D., & Fix, B. (2004). Narratives of workplace friendship deterioration. *Journal of Social and Personal Relationships*, 21(3), 321-340.
- Slagter, F. (2007). Knowledge management among the older workforce. *Journal of Knowledge Management*, 11(4), 82-96.
- Smedlund, A. (2008). The knowledge system of a firm: social capital for explicit, tacit and potential knowledge. *Journal of Knowledge Management*, 12(1), 63-77.
- Smith, E. A. (2001). The role of tacit and explicit knowledge in the workplace. *Journal of Knowledge Management*, 5(4), 311-321.
- Snape, E., & Redman, T. (2003). Too old or too young? The impact of perceived age discrimination. *Human Resources Management Journal*, 13(1), 78-89.
- Statistics New Zealand. (2008). *Labour market statistics: 2007*. Retrieved 3 September 2008. from <http://www.stats.govt.nz>.
- Stenmark, D. (2001). Leveraging tacit organizational knowledge. *Journal of Management Information Systems*, 17(3), 9-24.

- Styhre, A., Indelgard, A., & Roth, J. (2001). Gendering knowledge: the practices of knowledge management in the pharmaceutical industry. *Knowledge and Process Management*, 8(2), 65-74.
- Sveiby, K. E. (2007). Disabling the context for knowledge work: the role of the managers' behaviours. *Management Decision*, 45(10), 1636-1655.
- Swap, W., Leonard, D., Shields, M., & Abrams, L. (2001). Using mentoring and storytelling to transfer knowledge in the workplace. *Journal of Management Information Systems*, 18(1), 95-114.
- Thorpe, R., & Holt, R. (Eds.). (2008). *The sage dictionary of qualitative management research*. London: Sage Publications Ltd.
- Trew, S., & Waytt Sargent, J. (2000). *Working on a guide to managing older workers*. Auckland: CCH New Zealand Ltd.
- Von Krogh, G., Ichijo, K., & Nonaka, I. (2000). *Enabling knowledge creation: how to unlock the mystery of tacit knowledge and release of the power of innovation*. New York: Oxford University Press, Inc.
- Walsham, G. (2001). Knowledge management: the benefits and limitations of computer systems. *European Management Journal*, 19(6), 599-608.

APPENDICES

APPENDIX ONE (A)

Example of Historic Undervaluing of Women

A18

The New Zealand Herald ★ Wednesday, October 3, 2007

nzherald.co.nz

Big Picture

Side Swipe

IN 1943 *Mass Transportation* magazine offered an article titled *Tips on Getting More Efficiency Out of Women Employees* to its readers, including:

1. When you have to use older women, try to get ones who have worked outside the home at some time in their lives. Older women who have never contacted the public have a hard time adapting themselves and are inclined to be cantankerous and fussy. It's always well to impress upon older women the importance of friendliness and courtesy.
 2. General experience indicates that "husky" girls — those who are just a little on the heavy side — are more even tempered and efficient than their underweight sisters.
 3. Give the female employee a definite day-long schedule of duties so that they'll keep busy without bothering the management for instructions every few minutes. Numerous proprietors say that women make excellent workers when they have their jobs cut out for them, but that they lack initiative in finding work themselves.
 4. Give every girl an adequate number of rest periods during the day. A girl has more confidence and is more efficient if she can keep her hair tidied, apply fresh lipstick and wash her hands several times a day.
 5. Be tactful when issuing instructions or in making criticisms. Women are often sensitive; they can't shrug off harsh words the way men do. Never ridicule a woman — it breaks her spirit and cuts off her efficiency.
 6. Be reasonably considerate about using strong language around women. Even though a girl's husband or father may swear vociferously, she'll grow to dislike a place of business where she hears too much of this.
 7. Get enough size variety in operator's uniforms so that each girl can have a proper fit. This point can't be stressed too much in keeping women happy.
- (Source: Reddit.com)

Source: Reddit.com cited in New Zealand Herald, 03/10/07: A18

APPENDIX ONE (B)

Importance to Business of Older workers

CAREER

An oldie but a goodie

The workforce is ageing so it is time for a re-think on recruitment strategies



STEVE HART

BETTER healthcare and a change in people's attitude to retirement means older workers will increasingly be relied upon to keep the country going. In fact, Department of Labour figures show that by 2020 the number of people available for work will start to drop due to lower birth rates.

While this trend may leave the door wide open for older people who want to continue working beyond the typical retirement age of 65 – employers will have to be a little more open-minded when it comes to recruitment.

"It's getting easier," says Graham Stairmand, national president of Grey Power, a lobby group promoting the welfare and well-being of the over-50s. "But employers will have to be more flexible when it comes to employing older people."

"Older people often only want to work part time, perhaps starting work later in the day and they shouldn't always be expected to be as fast or as agile as their younger colleagues."

But what they may lack in physical fitness, they make up for in experience, knowledge of their company and industry and can be a strong guiding hand to new people to the industry.

Stairmand says having a work-life balance is important to older workers and that employers need to bear that in mind when recruiting because if official figures are correct it is not going to get any easier for recruiters.

Last year, the Equal Employment Opportunities commissioner, Dr Judy McGregor, predicted that New Zealand would need about 100,000 more people at work in the next 20 years just to stand still and yet older people were often the last to be considered for jobs or suffer "covert discrimination".

"We believe that businesses need to be thinking about their age profile and about retaining their mature staff," she said. "Baby boomers approaching retirement should also be considering whether they want to continue in paid work and what might make them stay."

"Ironically, New Zealand will need more people aged from 55 onwards to stay in paid work at a time when retirement and early retirement is popular."

Dr Judy McGregor, Equal Employment Opportunities commissioner

Stairmand says he's glad there is no longer a compulsory retirement age and welcomes the trend of older workers being able to keep on working. But concedes they may need a bit more support from their managers to younger staff.

"These older workers need a little bit of understanding and to be given some latitude by employers so they can, say, come in three mornings a week – they need flexible working hours."

"Before the labour market became as tight as it is now, managers thought that young was beautiful and younger

HOW TO ATTRACT OLDER WORKERS

- Offer flexible work times.
- Allow tele-commuting or a mixture of home and on-site work.
- Offer a compressed working week such as four 10-hour days.
- Offer job sharing.
- Introduce phased retirement so workers can transition into retirement while handing over skills and experience to other staff.
- Offer older workers contract work to retain their skills for specific projects or clients.

workers can do everything. So a lot of companies have a lot of experience and knowledge as they let their older, more experienced workers go.

"Employers have slowly but surely realised that that wasn't a good idea. Older workers have the experience of knowing how to do jobs or handle things that many young people have never seen before and that experience can be invaluable to a good employer."

Older workers may not be surprised to learn that New Zealand has one of the highest workforce participation rates in the OECD for the 50-64 year age group. Workers aged 55 make up one in six of the total work force.

And, say government statistics, in the past year the number of older people employed has grown by 5.9 per cent, which exceeds the growth in total employment of 1.9 per cent over the same period. More older men are now working with their participation rate standing at 49.3 per cent compared with 33 per cent for women.

Lesley Haines, the Department of Labour's group manager for workforce policy, says there's growing recognition by business that older workers are an experienced and valuable pool of labour that will help fill the skills gap. And many people welcome the chance to earn extra money to top up State benefits and pension so they can enjoy their free time even more.

A report called *45 plus: Choices in the Labour Market* provides an insight into drivers and barriers to paid work for people over 45.

"The research shows that many people in this age group still face barriers to taking up paid work. Some of the people have responsibility for young children or grandchildren, or for relatives," Haines says.

Combining these responsibilities with paid work can be challenging. "Other barriers faced by this age group included low or outdated skills, age discrimination, experienced and perceived, and not knowing where to go for information about work."

But Stairmand says things are moving in the right directions for older job hunters. He says employers are increasingly starting to recognise that older workers can learn and retrain for different jobs.



ASSETS: Older employees have a great deal of experience, and strategies are required to ensure they pass it on.

PICTURE / GETTY IMAGES

"Just because people are older it doesn't mean that the lift doesn't go to the top anymore," he says. "There is not the same level of reluctance as there used to be to employing the older worker."

And he says older people are as tech-savvy as their grandchildren when it comes to computers and the internet.

"The greatest uptake of the internet is by people aged over 65. A lot of elderly people do use computers."

In Stairmand's experience, most people want to work and say they enjoy the company their workmates give them as well as their jobs.

The results of an online work and age survey by the Equal Opportunities Trust to explore what people want from work as they get older, and what workplace conditions would encourage them to stay in paid work, showed that older people felt they were missing out on training, promotion and recruitment.

The trust's CEO, Dr Philippa Reed, says "They also felt their ideas and skills were not valued. The results also showed that older workers were look-

ing for flexibility in work practices that did not just mean working fewer hours each week. But also the flexibility to work fewer weeks a month or [fewer] months a year."

More than 6400 people took part in the online survey that also showed that 80 per cent of working people wanted flexibility in their retirement; 85 per cent of retired people hadn't had a flexible or part-time job before retirement; and 90 per cent of workers said either their employer was doing nothing (to transition them into retirement) or didn't know what their employer was doing.

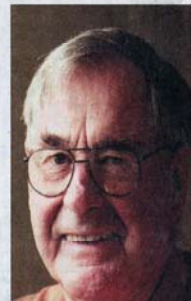
The report also showed that a third of the respondents had experienced age discrimination at work.

People aged over 45 were only slightly more likely to report discrimination than those under 45.

Dr Reed says age discrimination is mainly experienced in general attitudes, promotion opportunities, recruitment and salary level.

And that older people were more likely than younger workers to report discrimination in training.

And for those who can't get work,



Stairmand says many are starting up their own businesses.

"In the main, older workers are just as good a tradesman or professional as younger people," he says.

"Employers should not be worried about employing them," he says.

"Employers will have to be more flexible when it comes to employing older people."

Graham Stairmand, national president, Grey Power

ON THE WEB
www.greypower.co.nz
Contact Steve Hart at
www.stevhart.co.nz

APPENDIX TWO

AUT Dissertation Documents



Participant Interview: Information Sheet

Title of Project: Tacit Knowledge: An exploration into the perceptions of older women regarding the understanding and use of their tacit knowledge in the workplace.

Project Supervisor: Professor Judith Pringle

Researcher: Barbara Kent
Postgraduate Student of the AUT Business School

The aim of this study is to explore how older women understand and value their tacit knowledge and to conditions that influence their decisions whether or not to share their tacit knowledge in the workplace.

I am carrying out an exploratory research project that includes data collection by interviewing women who have volunteered to participate. This research project will complete my dissertation component of my Masters in Business degree. Volunteers will be called from women who have heard about this study and are interested to be involved.

The scope of the study is limited by the size of a dissertation, and will focus on one aspect only of knowledge management – tacit knowledge. Tacit knowledge is described as the knowledge learnt by repetitive experiences, the ‘know how’ held within an individual’s mind that supports the effective implementation of tasks. The criteria required from participants is that they are women and in the age group of 45 years old and over, and are in full time or part time employment.

The results of this study will be written as a component of my Masters dissertation that is forwarded to my supervisor and marker for assessment. I will be presenting a summary of the dissertation to a small number of groups as part of my qualification requirements. Participants will receive a summary of findings at the completion of the research. The information gathered in this project may form part of a larger doctoral study at a later time. At all times, within the written documents, and during presentations, there will be no reference to any identifying factors that relate to participants.

Your participation in this research project is confidential and anonymous. If you volunteer to participate and to be interviewed by me, you will be interviewed once, one to one, at a place that you feel comfortable and at a time that best suits your schedule. The interview will take approximately 30-40 minutes of your time. It is not the intention of this interview process to in any way create feelings of discomfort or risk to yourself. However, you may stop or pause the interview at any time if you wish to. The discussions will be recorded on an audio recorder. The recorded information will be later transcribed by myself and collated with other participant responses to identify common themes. At the end of the study, all information collected will be stored confidentially within secure facilities at AUT, with transcripts and consent forms being stored separately to ensure confidentiality and anonymity for all participants.

I have attached a Consent Form to this information sheet. If you would like participate in this research project, please complete the form and return it to me within two weeks. Once I have received your signed consent form, I will contact you to discuss any questions you may have or further information that you may like about the project or process, and to arrange a meeting time for an interview.

Barbara Kent

Mobile: 021-834417

Email: br.kent@auckland.ac.nz

Any concerns regarding the nature of this project should be notified in the first instance to the Project Supervisor: Dr Judith Pringle, Professor of Organisational Studies, Faculty of Business, Auckland University of Technology, Auckland. Phone: 09-92 19999, ext 5420.

Concerns regarding the conduct of the research should be notified to the Executive Secretary, AUTEK, Madeline Banda, madeline.banda@aut.ac.nz, 921 9999 ext 8044.

AUTEK approval details

Approved by the Auckland University of Technology Ethics Committee on 11/04/08. AUTEK Reference number 08/05



Individual Consent to Participate in Research

Title of Project: Tacit Knowledge: An exploration into the perceptions of older women regarding the understanding and use of their tacit knowledge in the workplace.

Project Supervisor: Professor Judith Pringle

Researchers: Barbara Kent

- I have read and understood the information provided about this research project on the Information Sheet dated 1 January 2008.
- I have had the opportunity to ask questions and to have them answered.
- I understand that my interview will be audio-taped for later transcription by the researcher.
- I understand my participation is voluntary. I can freely decide whether or not to participate.
- I understand that I may withdraw myself or any information that I have provided for this project at any time prior to completion of data collection, without being disadvantaged in any way.
- If I withdraw, I understand that all relevant tapes and transcripts, or parts thereof, will be destroyed.
- I agree to take part in this research.

Participant signature:

Participant name:

Contact Details:

.....
.....

Date:

**Approved by the Auckland University of Technology Ethics Committee on 11/04/08
AUTEK Reference number 08/05**

Indicative Interview Questions

Title of Project: Tacit Knowledge: an exploration into the perceptions of older women regarding the understanding and use of their tacit knowledge in the workplace.
Project Supervisor: Professor Judith Pringle
Researcher: Barbara Kent

Interview and Focus Group Questions (discuss context of questions)

1. Have you had the opportunity to participate in any situations where you have shared your knowledge and experiences with others in the workplace?
 - a. Can you describe some of these situations for me
 - b. Can you tell me if you think that the other person(s) have understood and have used this information
 - c. Please describe how you felt about sharing your knowledge/ experiences during and after the process
 - d. Can you think of any other ways that you have taught others or shared your knowledge at work

2. Which way do you feel is the best way to share your knowledge or experiences with others in the workplace
 - a. Can you give me an example when you felt sharing your knowledge was a good experience
 - b. Can you give me an example when you felt sharing your knowledge was not a good experience
 - c. Can you describe any situations that have influenced your decisions whether to share your knowledge or not
 - d. What are your thoughts about sharing your knowledge at work in the future

3. How do you keep, or store, all your knowledge
 - a. Have you ever thought about the value of that knowledge – if so, can you explain how you value it
 - b. Have you ever been rewarded at work for your knowledge – if so, can you describe the type of reward you received
 - c. Are you interested in being able to measure, or put a value on your knowledge

4. What are the type of situations at work that may influence your decisions on whether to share or not share your knowledge
 - a. Can you describe any emotions or feelings you may have during these decisions
 - b. Do any of these emotions affect how you feel about being at work or how you carry out your work
 - c. Do you think that other people share their knowledge with you
 - d. How does that make you feel towards this person(s) and does it have an affect on your work or feelings towards your colleagues/manager

5. Would you like to add any comments about these questions or what we have discussed?

6. Have you any other reflections or thoughts you would like to add?

7. Are there any questions you would like to ask me?

8. Is there any part of this interview you would like me to remove from the transcript?