

Organisational knowledge creation applied to multi-practitioner arts-related practice-led research projects

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ABSTRACT

This research investigates the theory of organisational knowledge creation as a viable model in the management of multi-practitioner arts-related practice-led research projects conducted at the North-West University, Potchefstroom Campus. In this regard *Transgressions and Boundaries of the Page* (2009-2012) (an interdisciplinary exploration of a practice-led research project by means of the artist's book) is analysed according to the said theory in order to ascertain the compatibility of this theory and the projects outlined. It should be noted that the particular project is not discussed as an example of the application of the theory of organisational knowledge creation. Rather, the purpose of this research is to identify the appearance of salient aspects of the given theory in order to ascertain whether this could be an appropriate management model for future projects of this nature. Accordingly, the goal is to identify such a model that will facilitate and promote creative practice and accredited research within the History of Art, Graphic Design, and Creative Writing disciplines at the North-West Universities Potchefstroom campus.

The proposed coupling of the theory of organisational knowledge creation and multi-practitioner arts-related projects by way of practice-led research is underpinned by the fact that both can be situated within the participatory paradigm due to a common conceptualisation of knowledge. This paradigm offers an extended epistemology consisting of practical, experiential, presentational, and propositional knowledge. This paradigm effectively integrates both the tacit and explicit knowledge modalities, which are fundamental to practice-led research and the theory of organisational knowledge creation. A further commonality is the fact that knowledge is considered as an interdisciplinary, subjective and socially constructed phenomenon.

In the context of this research, practice-led research involves the self-reflective process, which involves the making, reading and interpretation of creative outputs in the academic milieu. This requires the utilisation of reflective practice to communicate both the tacit and explicit knowledge dimensions. Additionally the participatory paradigm, practice-led research and the theory of organisational knowledge creation advocate a knowledge process that moves through a tacit–explicit knowledge cycle. This knowledge

creation cycle in the participatory paradigm and the theory of organisational knowledge creation occur in four levels. In consequence, the *Transgressions and Boundaries of the Page project* has been managed in four phases. It is against this background that the four knowledge conversion levels of this theory are linked with the extended epistemology of the participatory paradigm to analyse the four phases of the *Transgressions and Boundaries of the Page project*.

The first phase of the *Transgressions and Boundaries of the Page project* entailed the conceptualisation, planning, and preparation during August 2008 to March 2009. This phase is analysed by means of level one of the theory of organisational knowledge creation (explicit to tacit knowledge conversion) and practical knowledge of the participatory paradigm.

The second phase of the project, namely knowledge creation, took place from March 2009 to January 2010. The analysis of this phase is accomplished by means of level two of the theory of organisational knowledge creation (tacit to tacit knowledge conversion) and experiential knowledge of the participatory paradigm.

The third phase of the project, namely knowledge presentation and communication, from February 2010 to July 2010 corresponds with, and is analysed by, level three of the theory of organisational knowledge creation (tacit to explicit knowledge conversion) and presentational knowledge of the participatory paradigm.

The fourth knowledge formalisation and dissemination phase of the project occurred during July 2010 to December 2011. This phase is analysed by means of level four of the theory of organisational knowledge creation (explicit to explicit knowledge conversion) and propositional knowledge of the participatory paradigm.

Consequently, I argued that each phase of the project correlates with the corresponding levels of the theory of organisational knowledge creation, knowledge conversion mechanisms and the knowledge modalities of the participatory paradigms. The four phases of the project and the four levels share common knowledge conversion and

creation processes and goals that are attributed to the common conceptualisation of knowledge. Distinct correlations between the knowledge creation goals of the knowledge conversion levels and phases were identified. Therefore, the mechanisms used to achieve knowledge conversion and creation were applicable to the assigned management phases of the project. It was further argued that it is possible to adapt the current management approach to the more structured theory of organisational knowledge creation without negating either the tacit or explicit knowledge modalities. Consequently it is concluded that the theory of organisational knowledge creation, which is a management model normally used in the commercial business context, could be utilised to manage multi-practitioner arts related practice-led research projects more effectively in the academic context.

Key words: Practice-led research, reflective practitioner, tacit and explicit knowledge, knowledge management, organisational knowledge creation, participatory paradigm

OPSOMMING

Hierdie navorsing ondersoek die teoretiese model van organisatoriese kenniskepping as 'n geldige model in die bestuur van kunsverwante praktykgeleide navorsingsprojekte wat aan die Noord-Wes Universiteit op die Potchefstroomkampus, deur multi-praktisyns uitgevoer is. Die *Oor die Einders van die Bladsy* (2009-2012) ('n interdisiplinêre ondersoek van 'n praktykgeleide navorsingsprojek deur middel van die kunstenaarsboek) is volgens hierdie teorie geanaliseer om die toepaslikheid daarvan op kunsverwante praktykgeleide projekte deur multi-praktisynsdeelname te bepaal. Kennis moet geneem word dat die *Oor die Einders van die Bladsy*-projek nie bespreek word as 'n voorbeeld van die toepassing van die teorie van organisatoriese kenniskepping nie. Die doel van hierdie navorsing is eerder om die teenwoordigheid van prominente aspekte van die teorie van organisatoriese kenniskepping te identifiseer ten einde vas te stel of dit 'n toepaslike bestuursmodel vir toekomstige projekte van hierdie aard sou kon wees. Gevolglik is die doel die identifisering van 'n bestuursmodel wat kreatiewe praktyk en geakkrediteerde navorsing binne die vakgroepe Kunsgeskiedenis, Grafiese Ontwerp en Kreatiewe Skryfkuns aan die Noord-Wes Universiteit se Potchefstroomkampus kan fasiliteer en bevorder.

Die voorgestelde verband tussen die teorie van organisatoriese kenniskepping en kunsverwante en multi-praktisynsprojekte deur praktykgeleide navorsing word versterk deur die feit dat albei, danksy 'n gedeelde konseptualisering van kennis, gesitueer kan word binne die deelnemingsparadigma. Die deelnemingsparadigma bied 'n uitgebreide epistemologie bestaande uit praktyk-, eksperimentele, aanbiedings- en stellingskennis. Hierdie paradigma integreer sowel versweë of stilkennis¹, as eksplisiete kennismodaliteite wat albei fundamenteel is in praktykgeleide navorsing en die teorie van organisatoriese kenniskepping. 'n Volgende gemeenskaplikheid is die feit dat kennis beskou word as 'n interdisiplinêre, subjektiewe en sosiaalgekonstrueerde fenomeen.

¹ Die term *tacit knowledge* is moeilik vertaalbaar in Afrikaans. Die betekenis van die term verwys na implisiete en diep ingebedde kennis waaroor 'n mens dikwels intuïtief beskik danksy ervaring en insig. *Tacit knowledge* word in hierdie Opsomming met versweë of stilkennis vertaal.

Binne die konteks van hierdie navorsing, sluit praktykgeleide navorsing die self-reflektiewe proses in. Die selfreflektiewe proses omvat die skep, lees en interpretasie van kreatiewe uitsette in die akademiese milieu. Dit benodig ook die gebruik van reflektiewe praktyk om sowel die versweë as eksplisiete kennisdimensies te kommunikeer. Bykomend ondersteun die deelnemingsparadigma praktykgeleide navorsing en die teorie van organisatoriese kenniskepping as 'n kennisproses wat deur 'n versweë-eksplisiete kennissirkel beweeg. Hierdie kenniskeppende sirkel in die deelnemingsparadigma en die teorie van organisatoriese kenniskepping geskied in vier vlakke. Ooreenstemmend is die *Oor die Einders van die Bladsy*-projek in vier fases bestuur. Dit is teen hierdie agtergrond dat die vier kennis-omskakelingsvlakke van die teorie van organisatoriese kenniskepping verbind word met die uitgebreide epistemologie van die deelnemingsparadigma om die vier fases van die *Oor die Einders van die Bladsy*-projek te analiseer.

Die eerste fase van die *Oor die Einders van die Bladsy*-projek het bestaan uit konseptualisering, beplanning en voorbereiding gedurende Augustus 2008 tot Maart 2009. Hierdie fase word geanaliseer deur middel van vlak een van die teorie van organisatoriese kenniskepping (vanaf eksplisiete tot versweë kennisomskakeling) en praktiese kennis van die deelnemingsparadigma.

Die tweede fase van die projek, naamlik kenniskepping het vanaf Maart 2009-Januarie 2010 plaasgevind. Die analisering van hierdie fase word gedoen deur middel van vlak twee van die teorie van organisatoriese kenniskepping (vanaf versweë tot versweë kennisomskakeling) en eksperimentele van die deelnemingsparadigma.

Die derde fase van die projek, naamlik kennisaanbieding en kommunikasie het vanaf Februarie 2010 tot Julie 2010 geduur en korrespondeer met, en word geanaliseer deur vlak drie van die teorie van organisatoriese kenniskepping (vanaf versweë tot eksplisiete kennisomskakeling) en die aanbiedingskennis van die deelnemingsparadigma.

Die vierde kennisformalisering en verspreidingsfase van die projek het gedurende Julie 2010 tot Desember 2011 plaasgevind. Hierdie fase word geanaliseer deur vlak vier van die teorie van organisatoriese kenniskepping (eksplisiet tot eksplisiete kennisomskakeling) en stellingskennis van die deelnemingsparadigma.

Gevolgtrekking argumenteer ek dat elke fase van die projek verband hou met die korresponderende vlak van die teorie van organisatoriese kenniskeppings, kennisomskakelingsmeganismes en die kennismodaliteite van die deelnemingsparadigma. Die vier fases van die projek en die vier vlakke het gedeeltes kennisomskakeling en kreatiewe prosesse en doelwitte wat kenmerkend is van die gemeenskaplike konseptualisering van kennis. As sodanig is spesifieke korrelasies tussen die kenniskeppingsdoelwitte van die kennisomskakelingsvlakke en die fases geïdentifiseer. Gevolgtrekking is die meganisme wat gebruik is om kenniskepping en -omskakeling te bereik, toepaslik tot die gekose bestuursfases van die projek. Ek argumenteer voorts dat dit moontlik is om die huidige bestuursbenadering toe te pas op die meer gestruktureerde teorie van organisatoriese kenniskepping sonder om die versweë of eksplisiete kennismodaliteite te negeer. Gevolgtrekking kom ek tot die gevolgtrekking dat die teorie van organisatoriese kenniskepping wat normaalweg 'n bestuursmodel in 'n finansiële konteks is, aangewend sou kon word in die bestuur van kunsverwante praktykgeleide navorsingsprojekte deur multi-praktisynsdeelname in die akademiese konteks.

Slutelwoorde: praktykgeleide navorsing, reflektiewe praktisyn, versweë en eksplisiete kennisbestuur, organisatoriese kenniskepping, deelnemende paradigma.

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LIST OF ABBREVIATIONS

AHRC:	Arts and Humanities Research Council
DHET:	Department of Higher Education and Training
NWU:	North-West University
PLR:	Practice-led Research
SECI:	Socialisation, Externalisation, Combination, Internalisation
TBP:	<i>Transgressions and Boundaries of the Page</i>
TCC:	<i>Tracking Creative Creatures</i>
TOKC:	Theory of organisational knowledge creation

CHAPTER ONE: INTRODUCTION

1.1 Introduction

Since the 1990s, creative disciplines such as Fine Art, Creative Writing and Design, have been integrated into the academic (University) context (Kälvemark, 2011)² in the United Kingdom, Europe, Australia and South Africa. The integration process specific to each locality has not been uniform due to diverse political, social and cultural considerations as well as the variety of institutional frameworks involved. Schwarz (2011:xxviii) and Kälvemark (2011:10) state that in the United Kingdom and Europe, this process came about due to political initiatives, driven in part by the growth in the creative industries and the need for innovative research in knowledge based societies. The incorporation of the creative disciplines led to an expectation that faculty members and postgraduate students would produce research that contributed to the institutional research context. The dominant research culture in this context was (and still is) characterised by the prioritisation of explicit (textual) research, which is submitted to journals and receives research accreditation.

Prior to their integration into the universities, Art and Design institutions were concerned with delivering practical professional and vocational training. However, within the university context, artists, designers and other creative practitioners found themselves in a system that favoured written research above creative practice. In other words, creative practitioners were forced into a system that negated the value of their creative practice, which is viewed by them as a fundamental knowledge generating activity (Biggs & Büchler, 2011:83). The ensuing dilemma, fuelled by the practitioners' unwillingness to relinquish their creative practice, has resulted in a multitude of opinions concerning what research in the creative disciplines might entail. This relatively new area of research remains a field of negotiated conflict and dispute. Basic issues, such as terminology, methodology and research criteria, are, for instance, still subjects of debate (cf. Gray & Malins, 2004; Durling & Niedderer, 2007; Sullivan, 2006; Biggs &

² Similarly, other countries such as the United States and Sweden have also initiated less established practice-led research programmes that were not initiated by formal integration into the university context. (Candy & Edmonds, 2011:121).

Büchler, 2008; Farber, 2010; Munro, 2011; Biggs & Büchler, 2011). Accordingly, it seems unlikely that a standard set of research criteria will be agreed upon in the near future.

Having said this, there are, however, some points of consensus. For instance, it has been generally (but not exclusively) accepted that the contribution of creative disciplines to knowledge is premised on the communication of the tacit and explicit dimensions in the production of original creative works.

Tacit knowledge, in this context, is regarded as that dimension of knowledge which is difficult to express in words and includes aspects such as personal experiences that are rooted in individual actions and informed by ideals, values, subjective insight, intuition and hunches; generally understood as experiential knowledge. Additionally, the notion of "knowing how" (or skills-based knowledge) is of equal importance and is linked to bodily experience (Nonaka & Takeuchi, 1995:8; Biggs, 2004:7). Artefacts are viewed as embodiments of tacit knowledge modalities in that they often encapsulate the above-mentioned aspects. Explicit knowledge, on the other hand, is easily communicated and transmitted by the codified systems of language. This type of knowledge is recorded in textual and numerical formats such as articles, reports, manuals, and books, which are stored in libraries, archives and in digital database systems, rendering it easy to access and transfer (Nonaka & Von Krogh, 2009:636).

In line with the above, research in the creative disciplines relies on the double articulation of creative practice and words to explicate meaning. The particular roles of creative practice and text are still unclear, but they are viewed as complementary dimensions that serve to legitimise each other (cf. Biggs & Büchler, 2008:14; Robson *et al.*, 2010:194; Sullivan, 2006:28).

An additional point of consensus, which is important in the context of this study, is that practice-led research is frequently conducted as a collaborative activity. This implies that participants contribute to the larger pool of knowledge and are involved in a multi-

directional learning and development process (Gray & Malins, 2004:21). Rust *et al.* (2007:51) identify collaborative and interdisciplinary research as a strong research focus of universities in the United Kingdom. According to Smith and Dean (2009: 9/23-24), higher education constitutes a conducive (creative, intellectual and financial) environment in which cyclic reciprocation within a collaborative group with distributed expertise is achievable. They also argue that creative practice at university level will be most fertile when it actively engages with other kinds of research activities in an interdisciplinary way rather than being estranged or isolated from them. Interdisciplinary collaboration implies that individuals from different spheres, areas or domains are involved in the same activity or within the same space. Such collaboration is a dynamic process, given that participants have diverse frames of reference, knowledge and skills, and learn through interacting with each other (Marley & Greyling, 2010:167-168; Nowotny, 2011:xxv).

Successful and productive collaboration, regardless of the collaborative model adopted, displays certain characteristics and conditions. These include sustained time and effort, the search for common ground, the development of a common understanding of the creative vision, the development of a shared language, the pleasures and risks of honest dialogue and the engagement in extensive exploratory and safe 'what-if?' discussions (Edmonds *et al.*, 2005:467; John-Steiner, 2000:204; cf. Marley & Greyling, 2010). Furthermore, collaboration often involves the transference of skills and a clearer understanding of both theory and practice (Brown & Sørensen, 2009:156; Evans & Gandolfo, 2009:8).

According to the literature, authors who have written about creative and practice-led research collaborations have focused on identifying emergent trends, patterns and characteristics of the collaborative process (Edmonds *et al.*, 2005; John-Steiner, 2000; Smith & Dean, 2009). While it is recognised that knowledge creation occurs in creative collaborative practice, little attention has been paid to identifying an overarching management model that will facilitate knowledge creation within interdisciplinary arts-related practice-led research projects.

The above-mentioned problematic issues regarding practice-led research and collaborative practice inform the context of this study. Consequently, this study investigates whether the practice of conducting multi-practitioner arts-related practice-led research projects involving the disciplines of History of Art, Graphic Design, and Creative Writing, within the Faculty of Art at the North-West University, Potchefstroom Campus, could benefit from the application of a knowledge management theory that focuses on knowledge creation³. In the context of this study, collaborative projects that have been conducted at the North-West University and which involved a number of interdisciplinary participants who are investigating an arts-related theme by means of practice-led research, are referred to as multi-practitioner arts-related practice-led research projects.

The basic premise of these projects is to invite a variety of artists and theorists from different disciplines to produce artworks for an exhibition with a pre-established theme. The resultant creative processes and productions then serve as the catalyst for further discussion and exploration. These discussions, debates and interactions are initiated in order to facilitate the production of creative practice and written, accredited research⁴ outputs.

The theory of organisational knowledge creation, as conceptualised by Nonaka, (1994; Nonaka & Takeuchi 1995; Nonaka & Von Krogh 2009) was investigated as a possible model appropriate for managing such research projects. This concept facilitates the conversion of tacit to explicit knowledge. Individual tacit knowledge that emerges is converted to explicit knowledge by means of specific knowledge conversion mechanisms and social interaction. It is argued that the theory of organisational

³ It should be noted that the initial conceptual premise for the current study was originally explored in an article entitled *Investigating the appropriateness of the theory of organisational knowledge creation as a management model for practice-led research* (Marley, 2012:6-15). Therefore, there are correlations and commonalities between Chapter one of this study and the above-mentioned article.

⁴ Accredited research or accredited articles refers to research that has undergone a peer review process and been published in journals accredited by the Department of Higher Education and Training (DHET).

knowledge creation is a management model that prioritises both tacit and explicit knowledge, which can accommodate the serendipitous interdisciplinary nature of practice-led research. It is thus possible that this management approach could have wider applications and be applied to other arts-related practice-led research projects in different contexts and situations.

For these reasons, this study entailed the identification of compatible and complementary aspects of practice-led research and the theory of organisational knowledge creation in order to ascertain the value of this management approach for multi-practitioner arts-related practice-led research projects of this nature in the creative disciplines.

In this regard, a post-project analysis of such a project, specifically *Transgressions and Boundaries of the Page*, was undertaken as an interdisciplinary exploration of a practice-led research project by means of the artist's book (2009-2011), and was conducted at the Potchefstroom campus of the North-West University. This project was not specifically managed by means of the theory of organisational knowledge creation, and is therefore not discussed as an example of this theory. The function of this analysis was, rather, to ascertain whether this is an appropriate management model by identifying commonalities concerning the paradigmatic knowledge foundation and knowledge conversion processes. It is contended that if this management model may be applied to the said practice-led research projects, it will offer a more structured approach to knowledge management, conversion, and creation. The application of this theory within the artistic context is novel, as it is normally applied in the commercial business management environment and not to the arts-related academic context (Nonaka *et al.*)⁵. This study's aim was to establish whether practice-led research and the theory of organisational knowledge creation share the same conceptualisation of knowledge in order to identify an appropriate research paradigm for the former. This

⁵ When Nonaka *et al.* (without a specific year) is used in the text, the reference refers to the collective writings of Nonaka in collaboration with other authors between 1995 and 2009.

was necessary to be able to clarify whether the application of this theory would facilitate knowledge creation in the above-mentioned practice-led research projects. As these projects are conducted in the academic context, it was also necessary to determine the position of practice-led research within the parameters of institutional research criteria.

While this is not a purely art historical study, representatives of the History of Art subject group are included in these research projects. An interaction between Art Historical enquiry (critical theory) and practice-led research exists that could open up new research possibilities. In this regard, I concur with Brown and Sørensen (2009:156) who argue that collaborative research partnerships help to bridge the gap between theory and practice by providing complementary skills, which may lead to what Smith and Dean (2009:24) refer to as hybrid research possibilities. This type of collaborative interaction is important because, if creative practice in the form of practice-led research is to contribute to and thrive in the university context, the expectations of the formal research environment and the unique characteristics of the creative disciplines need to be balanced. As such, creative practitioners working within an academic milieu have to respond to the challenge of placing creative practice on a more solid, rigorously formulated foundation (Sullivan, 2005:26).

1.2 Contextualisation and background

The exploration of practice-led research in the North-West University context arose out of the need of practitioners to position their creative production within the institutional research context. As per the international case, these practitioners also considered their production as fundamental to the research process. The first practice-led research project conducted was an interdisciplinary investigation into the creative process, known as *Tracking Creative Creatures* (2007-2009). The second project was the earlier mentioned project, *Transgressions and Boundaries of the Page*.

The intention of these projects has been to stimulate both creative practice and written research within the History of Art, Graphic Design and Creative Writing subject groups as well as to develop research capacity amongst the individual group members, for the

establishment of a research niche⁶ for these disciplines. These projects are collaborative group efforts, which have encouraged, promoted and facilitated participation in creative practice in the form of artefacts, and in research in the form of written articles in an accredited journal (cf. Marley, 2012:7).

Although not conducted with a specific management theory in mind, these projects have delivered substantial creative and research outputs. For example, the *Transgressions and Boundaries of the Page* project resulted in exhibitions in Stellenbosch, Potchefstroom and Johannesburg during 2010, and the publication of twelve articles in a dedicated edition of the peer-reviewed journal *Literator*⁷ (2012:1[33]), as well as a greater understanding of practice-led research. The managerial approach of both the above-mentioned projects was aligned to the project aims and some guiding principles were established. However, during the execution of these projects, it was realised that this type of project requires a specific management approach, which focuses on and promotes knowledge creation relevant to practice-led research (Marley, 2012:7).

1.3 Theoretical point of departure

As mentioned, practice-led research is based on, and characterised by, the exploration of issues and interests through the production of an artefact or artefacts. This notion, by implication, suggests that artistic activity and creative outputs are regarded as research (Scrivener & Chapman, 2004). Nevertheless, whether the artefact can be viewed as an independent entity and make a contribution to research without a textual explication of the specific work and concept, is a problematic issue that has been much debated

⁶ An application for a research niche that would include the History of Art, Graphic Design and Creative Writing subject groups was submitted to the University Research Council in 2008. This application, entitled *Visual narratives and creative outputs through interdisciplinary and practice-led research*, was unsuccessful. However, on the 5th of September 2013, research niche status was awarded after a second application was submitted at the end of 2012. The inception date of this niche was January 2014 (cf. Chapter two).

⁷ *Literator* is a Department of Higher Education and Training (DHET) peer reviewed and open access journal of literary criticism, linguistic and literary studies which was established in 1988. <http://www.literator.org.za/index.php/literator>

(Marley 2012:8; cf. Douglas *et al.*, 2000; Sullivan, 2006; Niedderer, 2008; Biggs & Büchler, 2011; Borgdorff, 2011; O' Riley, 2011).

In 1993, Christopher Frayling (1946) was one of the first authors to discuss the role of research in the artistic and creative disciplines in relation to the academic context. He identified three modes of research in the arts: research for art, research into art and research through art (Frayling, 1993:5; cf. also Biggs, 2002a: 111-112; Borgdorff, 2011:46). Each of these three modes suggests a different relationship between the artefact, and the creative process, to existing research criteria.

The first mode, research for art, is often technical and instrumental by nature; for example, the investigation of and experimentation with new media. It frequently takes place through personal research in the preliminary and execution phases and is not articulated in theoretical writing. In this sense, research for art does not engage with traditional research criteria and constitutes what Douglas *et al.* (2000:3) refer to as personal research. However, Frayling (2006:xiii-xiv) later amended the term “research for art” to “art as research”, which according to Scrivener (2009:71), opens up the possibility of recognising artefacts as research in their own right, without textual explication. This corresponds with the notion of performative research, which Haseman (2006:6) views as a new paradigm. His proposed paradigm is different from quantitative and qualitative research in that it recognises creative outputs as the embodiment of the research finding, which does not need textual explanation or contextualisation.

In the second mode, research into art, the art object itself becomes the subject of investigation; this correlates with the interpretive practices of the humanities and social sciences research. In this type of interpretive research, a range of dialogic/dialectical methodologies is used to deconstruct and reconstruct reality, according to particular theoretical frameworks (Guba & Lincoln, 1994:111-112). Art historical investigations that interpret artworks from a particular theoretical position fall into this mode.

In the third mode, research through art, the artefact and creative process comprise the method by means of which research is generated. This is often a personal, exploratory

creative journey of discovery, during which the reflective process and related artefacts are knowledge-generating activities. However, in this context, practice-led research relies on the double articulation of practice and theory. As such, the artefact must be placed in a cultural, historical, or theoretical framework (cf. Farber & Mäkelä, 2010; Scrivener, 2009:69-71).

Frayling's (1993:5) categorisation has been influential in terms of other writers in the field, the effect of which has led to two schools of thought (Biggs & Büchler, 2008:6). The first, more closely aligned with research for art or art as research, considers the process of creating, as well as the art object, as research in its own right. Those who support this position argue that the inherent nature of creative practice should be recognised and regarded as a unique type of research, not requiring any textual explanation to validate it (cf. Olivier, 2010; Haseman, 2006; Bolt, 2008). This approach essentially separates creative practice from engaging with traditional research criteria and is referred to by Biggs and Büchler (2008:6) as the isolationist position.

The second school of thought, with which I concur, is the more commonly held view, correlating with research through art. In this context, it is considered important that researchers in the creative disciplines negotiate with current research criteria and find a middle ground that is conducive to creative practice. While a spectrum of opinions exists as to how this should occur, it is referred to as the situated position (Biggs & Büchler, 2008:6).

Accordingly, in order to satisfy both academic requirements and creative practitioners, it is the combination of text (explicit and propositional content) and artefact (experiential, practical and tacit content) that is required in order to contextualise knowledge effectively (cf. Borgdorff, 2011; Candy & Edmonds, 2011; Mäkelä & Routarinne, 2006; O' Riley, 2011; Farber, 2010).

The notion of formal research, as advocated by Douglas *et al.* (2000:5) falls within the situated position. This is a type of practice-led research conducted within the academic

milieu and undertaken as part of a formal qualification or as a peer-reviewed research output. As such, the mechanisms of academic validation and justification are applied in order to evaluate and validate such work. This research needs to contribute to the body of knowledge within the field or discipline and, as a result, is subjected to more formalised research methodologies and outcomes than personal research. Therefore, the artefact is an essential part of the research outcomes, but must be supported by a textual document to explicate and contextualise the concept, argument or proposition. It should be noted that practice-led research should not be enslaved by existing academic criteria but rather find a position that accommodates and allows creative practice to contribute to knowledge creation. Consequently, and of significance, is the warning from Scrivener and Chapman (2004) who caution that one should not lose sight of the fact that the true nature of arts research is the creation of original artistic production. Research in this context is concerned with the original insight and comprehension of discourses surrounding arts. Biggs (2002b:23) concurs, arguing that it is in the combination of artefact and knowledge embedded in the artefact and the critical exegesis thereof, that both knowledge and understanding are advanced. In this sense, the artefact is viewed as a form of tacit knowledge, whereas the exegesis thereof constitutes explicit knowledge.

In regard to the above discussion, I am of the same mind as Farber (2010:2), who states that practice-led research is a self-reflective form of research in which the artistic production should be viewed as central to the investigation. In the academic context, the practitioner needs to provide a critical exegesis of the work and position it within a broader contextual, historical framework. Reflection in and on the creative production process by the artist is a fundamental part of the research. Additionally, the research findings need to be disseminated, a process which is achieved through a combination of knowledge modalities, which include the artefact and the exegesis thereof (cf. Biggs, 2002b:23; Mäkelä & Routarinne, 2006).

As such, practice-led research is an exploratory journey in which the issues, concerns and interest that focus on the production of the artefact are explored and investigated and, as mentioned, it is the combination of tacit and explicit knowledge that is of

importance in this research mode. Thus, praxis is regarded as an integral driving force of the research process, whereas the creative process is a way of understanding, contextualising and explaining both practice and theory (cf. Borgdorff, 2011:56; Mäkelä & Routarinne, 2006:22-23; Scrivener, 2009:69).

The works of two theorists, Michael Polanyi (1891-1976) and Donald Schön (1930-1997), are essential to the understanding of tacit knowledge and consequently, practice-led research in the context of this study. Polanyi (1958; 1962; 1966a; 1966b; 1968) coined the phrase “tacit knowledge” and provided a detailed discussion of its functioning and structure. Schön (1983, 1987) in his turn, built on the work of Polanyi in developing the notion of reflective practice and advocated an epistemology of practice. Tacit knowledge was considered by Polanyi (1966a:17-18) to be the personal aspect of any explicit knowledge and is essential in order to gain a holistic (non-reductionist) understanding of the knowledge with which one is concerned. In the context of this study, these two dimensions of knowledge are, however, never mutually exclusive, but rather, are different ways of viewing and approaching the same issue. This idea is of particular importance in the creative disciplines where explicit knowledge does not, and often cannot, provide the full scope of the knowledge that is generated. In such cases, knowledge transfer may only be achieved by a combination of both knowledge dimensions (Biggs, 2002b:23).

As mentioned in the introduction, collaboration and social interaction are an important and widely used practice in interdisciplinary, practice-led research projects. Gray and Malins (2004:104) argue that it is almost impossible to conduct practice-led research completely independently, but rather requires working with others to some degree. This type of collaboration often involves several people with different roles and skills sets, and results in both practical and theoretical outcomes. The outcomes typically entail practical outcomes as well as text-based contextualisation of these (Mafe & Brown, 2006:16).

It is this type of collaborative practice and the conceptualisation of knowledge that link the theory of organisational knowledge creation and practice-led research. The premise of the said theory is that tacit knowledge held by individuals is able to be amplified, enriched and converted into explicit knowledge through social interaction and shared on an organisational and societal level. This implies a symbiotic relationship between individual and organisational knowledge. The aim of the theory of organisational knowledge creation is to facilitate a process of knowledge creation that transcends "economic rationality", which has been the focus of earlier Western managerial models and theories. Concomitantly, a further aim is to develop a more "humanistic" notion of knowledge creation, which includes aspects such as human experience, emotion and skills level (Nonaka, 1994:14/34). In this sense, the organisation is viewed as a living organism rather than an information-processing machine (Nonaka & Takeuchi, 1995:9).

It should also be noted that the definitions of tacit and explicit knowledge suggested by literature in the field of practice-led research and the literature on the theory of organisational knowledge creation similarly defined. In terms of the notion of knowledge, Nonaka (1994:5) adopted the definition of knowledge as "justified true belief". The emphasis for Nonaka, falls, however, not on truth or truthfulness, but rather on "justification". As such, the focus falls on the desire and aspiration to understand and justify personal belief as truthful knowledge. This focus on the subjective nature of knowledge is deeply rooted in the value-systems of the individual. Similarly, the justification of experiential feeling and experience is also an essential part of practice-led research, as research questions and problems in the creative disciplines often arise from intuitive hunches and from working processes (Biggs, 2004:14). In Nonaka's theory, as is the case with practice-led research, the tacit and explicit dimensions are considered to be complementary dimensions and together form a holistic picture of knowledge (Niedderer, 2008:27; Nonaka & Takeuchi, 1995:237-238). The theory of organisational knowledge creation, however, provides a mechanism by means of which one is able to manage the conversion from tacit to explicit knowledge.

In this mechanism or model, tacit and explicit knowledge interact in four different modes. These modes together constitute the mechanism that facilitates the conversion of tacit to more explicit knowledge. The SECI model that consists of the following modes brought this about: socialisation (tacit to tacit conversion), externalisation (tacit to explicit conversion), combination (explicit to explicit conversion) and internalisation (explicit to tacit conversion) (Nonaka, 1994:18; Nonaka *et al.*, 2006:1182).

The spiral of knowledge creation requires a constant dialogue between the four knowledge conversion modes and, by implication, between tacit and explicit knowledge. Consequently, while each mode generates new knowledge independently, organisational knowledge creation hinges on the interaction and management of the four modes and the utilisation thereof (Nonaka *et al.*, 2000:8).

Therefore, in the context of this study, the theory of organisational knowledge creation was selected for three reasons. Firstly, in this theory, knowledge is conceptualised as a holistic concept with both tacit and explicit dimensions. Secondly, knowledge is created by means of social interaction for the benefit of the greater organisational structure. Thirdly, this theory focuses specifically on knowledge conversion and knowledge creation and provides specific knowledge management structures. Additionally, the theory of organisational knowledge creation is considered the most influential perspective in its field. Niedderer and Imani (2008:9) have already demonstrated the usefulness of the theory for practice-led research in an individual research context and have suggested that research needs to be conducted on a macro level.

The assertion underpinning this study is that the management of multi-practitioner arts-related practice-led research projects would benefit from the utilisation of the theory of organisational knowledge creation. The premise of this is that these practice-led research projects as well as the theory of organisational knowledge creation advocate a holistic view of knowledge, which can be created by social interaction. However, in order to substantiate this line of reasoning, it is important to determine a paradigmatic

stance. This implies identifying an appropriate research paradigm that will guide the ontological, epistemological and methodological approaches.

Accordingly, in this study, five research paradigms are investigated: positivism, post-positivism, critical theory, constructivism (Guba, 1990; Guba & Lincoln, 1994; Terre Blanche *et al.*, 2006:6) and the participatory paradigm (Heron, 1996; Heron & Reason, 1997). The discussion of these paradigms indicates the philosophical shift from positivism to the participatory paradigm. Although these paradigms are able to coexist (Terre Blanche *et al.*, 2006:9), they represent a spectrum with detached objective knowledge (positivism) at one end and a more subjective, experiential, interpretive notion of knowledge at the other (participatory paradigm).

The participatory paradigm is viewed as appropriate in the context of this study because of its emphasis on the experiential, tacit dimension and the socially constructed nature of knowledge (Heron & Reason, 1997:278-286). Ontologically speaking, the participatory paradigm conceives reality from an objective-subjective point of view. As such, reality is co-created in the mind of the individual, the individual in various forms of interrelatedness with other people (group) and the world. The epistemological foundation of this paradigm is that knowledge is perceived as a holistic construct that is a combination of experiential, propositional, presentational, and practical knowing (Heron, 1996:53; Heron & Reason, 1997:270-283, 289). In this context, experiential, presentational and practical knowing is concerned with the tacit dimension, while propositional knowledge relates to the explicit dimension. These four knowledge distinctions may be viewed as a more nuanced development of Polanyi's concept of tacit knowledge and are of importance when discussing practice-led research. For example, experiential knowledge is manifest as presentational knowledge in the form of graphic, plastic, musical, vocal and verbal art forms (Heron & Reason, 1997:281). Consequently, the presentational dimension invites exploratory, imaginative and interpretive possibilities while the propositional one guides and positions understanding and interpretation.

Methodologically, knowledge is generated by means of social interaction or participatory action enquiry, motivated by epistemic participation and political participation (Heron, 1996:21; Heron & Reason, 1997:283-286, 289). Accordingly, the participatory paradigm is viewed as an appropriate paradigm in which to position practice-led research and the theory of organisational knowledge creation.

Based upon the above-mentioned context, background and theoretical exploration, the following problem statement and research questions were identified:

Multi-practitioner arts-related practice-led research projects conducted in the academic context require a management approach specifically focused on knowledge generation and communication, and which balances the institutional research requirements with the integrity of practice-led research.

I argue that the theory of organisational knowledge creation and practice-led research are compatible concepts due, firstly, to their core conceptualisation of knowledge as a holistic/non-reductionist concept and, secondly, due to their shared goal of knowledge conversion by means of social interaction. As such, the theory of organisational knowledge creation will be beneficial when managing the said practice-led research because it is a theory that has the potential to accommodate the organic nature of practice-led research while, at the same time, contributing to institutional research requirements.

The research questions as well as the aims and objectives that will guide this study are:

1. To what extent does the conceptualisation of tacit knowledge, reflective practice and the participatory paradigm underpin practice-led research and the theory of organisational knowledge creation? This question is answered by means of a literature survey to identify the appropriate conceptualisation of knowledge and related research paradigm that underpins practice-led research and the theory of organisational knowledge creation.

2. What is the negotiated position of practice-led research in the academic context? This question is addressed by means of a critical exploration of literature to determine a negotiated position for practice-led research within the academic research context.
3. How does the analysis of the *Transgressions and Boundaries of the Page* project show evidence of and establish the possibility that the theory of organisational knowledge creation could be an appropriate management model for multi-practitioner arts-related practice-led research projects? An analysis of the *Transgressions and Boundaries of the Page* project by means of the theory of organisational knowledge creation demonstrates the usefulness of the theory in this context.

1.4 Methodological approach

The methodological approach for this qualitative research relies upon two complementary sections. A literature review undertaken in the first section was done to contextualise the concepts of tacit knowledge, reflective practice, research paradigms, practice-led research and the theory of organisational knowledge creation. The intent is to ascertain whether the practice of conducting the aforementioned practice-led research projects and the theory of organisational knowledge creation are compatible concepts that will facilitate knowledge creation in the academic context.

The second section of this study comprises an analysis of the *Transgressions and Boundaries of the Page* project in order to evaluate this multi-practitioner arts-related practice-led research project according to the preceding theoretical assumptions. This entails the identification of aspects and characteristics of the theory of organisational knowledge creation in this project. This analysis is situated, chronologically speaking, within the post-project reflection stage, during which the notions of lived experience and the insider perspective are regarded as a valid research approach (Gray & Malins, 2004:22; McIntyre, 2006:4; Sullivan, 2005:61). As one of the project leaders and managers of both the *Tracking Creative Creatures* and *Transgressions and Boundaries of the Page* projects, my role was multi-faceted due to my participation in all three

activities of each project, as identified by Gray and Malins (2004:20). These activities included, firstly, that of creative practitioner (which implies participating in the production of creative work and research material); secondly, that of self-observer who engages in reflection in and on action, both individually and through social interaction with others and, finally and most importantly, in the case of collaborative research projects, that of co-researcher, facilitator and manager. In this context, I agree with Gothe (2006:3) that the insider perspective allows for the recognition and understanding of emergent processes that contribute to the understanding of practice-led research.

In terms of the specific chapters, this study is structured as follows:

After having contextualised the context, problem statement, research questions, central theoretical statements and motivation for the study in the current chapter, the second chapter offers an overview of multi-practitioner arts-related practice-led research projects conducted at North-West University. The primary purpose of Chapter two is to describe the projects and identify management issues that are related to the theory of organisational knowledge creation and practice-led research in subsequent chapters. This entails a narrative description of these projects, which serves as contextual background for further theoretical exploration. The *Tracking Creative Creatures* project is initially discussed in order to identify salient issues that influenced the management of the *Transgressions and Boundaries of the Page* project. Thereafter the *Transgressions and Boundaries of the Page* project is discussed in more detail. Both these projects are described in terms of four management phases:

- phase one: conceptualisation, planning, and preparation
- phase two: knowledge creation
- phase three: knowledge presentation and communication
- phase four: formalisation and dissemination of knowledge

Thereafter, Chapter three deals with tacit knowledge as conceptualised by Polanyi (1958; 1962; 1966a; 1966b) and Schön's (1983, 1987) notion of reflective practice. The aim of the chapter is to clarify the importance of the tacit, experiential and practical dimensions of knowledge. The reason for this is that these two concepts are

considered as fundamental, both for research in the creative disciplines and for the theory of organisational knowledge creation. This is principally due to the epistemology advocated by both these concepts. This epistemology entails a holistic/non-reductionist conceptualisation of knowledge that comprises both tacit and explicit dimensions.

Chapter four concentrates on the identification of an appropriate research paradigm. The paradigm is required to accommodate the tacit, experiential, practical, and explicit knowledge dimensions that underpin both practice-led research and the theory of organisational knowledge creation. Accordingly, the ontological, epistemological and methodological dimensions of the aforementioned paradigms are investigated and the participatory paradigm, which advocates the notion of shared experience and collaborative interaction as a valuable knowledge source, is identified as an appropriate research paradigm in this context. The extended epistemology of this paradigm, comprising practical, experiential, presentational and propositional knowledge, is of importance, as it is a further development of Polanyi's tacit-explicit knowledge distinction. Furthermore, these knowledge distinctions are relevant as they correlate with the theory of organisational knowledge creation's concept of knowledge conversion modes, discussed in Chapters six and seven. Additionally, the notion of the creation of knowledge through social interaction or co-operative enquiry is also established as a principle that underpins the participatory paradigm, the theory of organisational knowledge creation and the said practice-led research projects.

This is followed, in Chapter five, by a contextual/historical background to the developments of research in the creative disciplines in order to highlight a number of problematic issues. This includes a discussion and clarification of the myriad terms used to describe research in the creative disciplines. Related to this discussion, practice-led research, in the context of this study, is considered as concurring with the situated position. This means that artistic production needs to be contextualised in order to contribute to knowledge. This contextualisation may make use of practical, experiential, presentational or propositional knowledge, which aligns practice-led research with the participatory paradigm

In Chapter six, an overview of the historical and conceptual development of the theory of organisational knowledge creation is provided. The notion of the knowledge assets⁸, SECI (modes), and *ba*⁹ are introduced. Correlations between the theory of organisational knowledge creation, practice-led research and the participatory paradigm are drawn. It is concluded that theory of organisational knowledge creation and practice-led research can be accommodated in the participatory paradigm as they share the same epistemological, ontological and methodological foundation.

Chapter seven provides a detailed description of the knowledge conversion mechanisms of the theory of organisational knowledge creation and indicates how they relate to the participatory paradigm. As such, four knowledge conversion levels are conceptualised, and are briefly outlined below.

Level one (explicit to tacit knowledge conversion): Routine knowledge assets, internalisation (SECI), exercising *ba* (knowledge conversion mechanisms of the theory of organisational knowledge creation), and practical knowledge (knowledge dimension of the participatory paradigm's extended epistemology).

Level two (tacit to tacit knowledge conversion): Experiential knowledge assets, socialisation (SECI), originating *ba* (knowledge conversion mechanisms of the theory of organisational knowledge creation), and experiential knowledge (knowledge dimension of the participatory paradigms extended epistemology).

Level three (tacit to explicit knowledge conversion): Conceptual knowledge assets, externalisation (SECI) and dialoguing *ba* (knowledge conversion mechanisms of the

⁸ Knowledge assets are the existing and developing stock of knowledge within an organization. Knowledge assets are both physical and intangible. As such, the SECI modes can utilise knowledge assets in the knowledge creation and conversion process (Nonaka *et al.*, 2008:42).

⁹*Ba* is the Japanese word for space and refers to the different spaces in which knowledge creation and conversion can occur (cf. Nonaka & Konno, 1998:40; Nonaka *et al.*, 2008:36).

theory of organisational knowledge creation), presentational knowledge (knowledge dimension of the participatory paradigms extended epistemology).

Level four (explicit to explicit knowledge conversion): Systemic knowledge assets, combination (SECI) and cyber or systemising *ba* (knowledge conversion mechanisms of the theory of organisational knowledge creation), propositional knowledge (knowledge dimension of the participatory paradigms extended epistemology).

In chapter eight, the four knowledge conversion levels mentioned above are correlated with the management phases of the *Transgressions and Boundaries of the Page* project. In other words, these knowledge conversion levels of the theory of organisational knowledge creation are used to analyse the *Transgressions and Boundaries of the Page* project.

This thesis concludes with Chapter nine, in which the results of this study are described, conclusions are offered and recommendations are made.

CHAPTER TWO: CONTEXTUALISATION OF MULTI-PRACTITIONER ARTS-RELATED PRACTICE-LED RESEARCH PROJECTS CONDUCTED AT NORTH-WEST UNIVERSITY**2.1 Introduction**

As stated in Chapter one, this research is concerned with an investigation into the theory of organisational knowledge creation (TOKC) as an appropriate management model for the multi-practitioner arts-related practice-led research (PLR) projects. These projects were executed at the North-West University (NWU) by the subject groups History of Art, Graphic Design and Creative Writing at the Potchefstroom Campus. These collaborative arts-related PLR projects were undertaken in order to advance creative practice, develop related research capacities and increase research outputs in this field. In this context, creative practice is viewed as the driving force and catalyst for further research. Therefore, this study aligns itself with international trends, with regard to the view that PLR in the academic (university) context is of a holistic/non-reductionist nature, which requires the double articulation of tacit and explicit knowledge (Gray & Malins, 2004:3; Mäkelä & Routarinne, 2006:12,24; Biggs & Büchler, 2008:12; Borgdorff, 2011:45).

This chapter presents an overview of two projects conducted at NWU: *Tracking Creative Creatures* (TCC) (2007-2009), an interdisciplinary investigation into the creative process, and *Transgressions and Boundaries of the Page* (TBP) (2009-2011), an interdisciplinary exploration of a practice-led research project by means of the artist's book.

The purpose of this overview is to illustrate how the execution of these multi-practitioner arts-related PLR projects created an awareness of significant theoretical and practical issues. The projects were conceptualised and formulated in terms of standard research formats. The initial project not being framed as a PLR project, many of the theories, principals and terminologies were only revealed during its execution. Nevertheless, it was during this process, that it became apparent that PLR was an appropriate research methodology.

For the purpose of this overview, this chapter is divided into three sections. The first section deals briefly with the research context at the NWU. In the second section, the TCC project (2007-2009) is discussed in order to shed light on the origins of conducting multi-practitioner arts-related PLR projects at NWU on the Potchefstroom Campus. Successful aspects and problematic issues that have influenced and informed the management of subsequent projects are identified. The discussion of the TCC project therefore serves as contextual background in order to substantiate further discussion.

In the third section, a more detailed account of the TBP (2009 - 2011) project is given, since this discussion informs the analysis of the TBP project undertaken by means of the participatory paradigm as well as that of the TOKC which is addressed in Chapter eight. Both the aforementioned projects are described according to the following four management phases:

- phase one: conceptualisation, planning and preparation
- phase two: knowledge creation
- phase three: knowledge presentation and communication
- phase four: formalisation and dissemination of knowledge

The project descriptions have been extrapolated and reconstructed from personal recollection, discussions with various participants and project related documents such as research and funding proposals, minutes of meetings and articles written about the projects. Additionally, a project journal kept by Prof S.F. [Franci] Greyling¹⁰ (one of the project managers) was also consulted. Consequently, the project descriptions within this chapter are post-project accounts informed by lived experience and insider perspectives, which, in the context of PLR, are considered valid research approaches (Sullivan, 2005:61 cf. Gothe, 2006). The notion of reflective practice, which encompasses reflection-in-action, reflection-on-action and indwelling (discussed in

¹⁰ When referring to specific people who were involved in the study the following conventions are used. The first time the name is mentioned (in a chapter) the title Christian name and surname are given; thereafter only the surname is used. In cases where there were more than one person with the same surname, the title, initial and surname are used throughout.

Chapter three) (Schön, 1983:54; Polanyi, 1966b:16-17), came into play. Reflective practice is in essence, a conversation between the particular situation or problem and the self. During this conversation, actions are evaluated and adapted in order to identify solutions to problems and or to re-evaluate for further action. Reflective practice is particularly relevant in new and untried situations (Schön,1983:62) such as the above mentioned projects. In the context of this study, reflective practice is utilised to develop theory derived from practice.

For the sake of clarity, the manner in which these projects unfolded is described chronologically. However, in many instances, events happened in a spontaneous, organic and unstructured way, which was flexibly managed, but which, given the nature of PLR projects, could not have been planned or controlled. Therefore, while events are described in a logical manner, they did not necessarily occur in this order; the creative ideas frequently had strange and seemingly unrelated origins and consequences. Additionally, it is impossible to give a detailed account of all the formal and informal discussions and events that occurred during the course of these projects. Therefore, only the most salient aspects, activities and decisions are discussed.

2.2 General Research Context at North-West University

At NWU, the Institutional Department of Research Support serves as a centre for research administration and support. This Department implements a model for NWU-based research entities, which provides a growth trajectory for these entities based on four levels of development: a Research Niche, a Research Focus Area, a Research Unit and finally a Research Centre of Excellence.

It is expected that a research entity on any one of these levels will have a clear focus that is linked to local, regional, national or international priorities. Although there is some correlation between the research entities and particular schools and faculties, the research entities function independently. Interdisciplinary research is encouraged and research entities should preferably be multi- and/or transdisciplinary in nature. In

principle, academic personnel (researchers) may partake in research within multiple research entities of their choice, should they elect to do so.

The abovementioned research structures are part of the NWU's strategic plan to move from a teaching and learning institution to a balanced teaching and research institution (NWU 2010; cf. Marley & Greyling, 2010:174). In this context, creative practitioners within the Faculty of Arts are expected to contribute to the institutional research quota, which initiated the conceptualisation and execution of multi-practitioner arts-related PLR projects.

The Faculty of Arts at NWU consists of five schools, the School of Languages, School of Philosophy, School of Music, School of Social and Government Studies, and the School of Communication Studies. In 2007, the Faculty had three research entities. A Research Unit for *Languages and Literature in the South African Context* situated in the School of Languages; a Research Focus Area for *Social Transformation* in the School of Communication Studies and a Research Niche *Musical Arts in South Africa* in the School of Music.

The first multi-practitioner arts-related PLR project conducted by the History of Art, Graphic Design, and Creative Writing subject groups, at the NWU, Potchefstroom Campus was the TCC (2007-2009) project. The Graphic Design and History of Art subject groups are situated in the School of Communication Studies while the Creative Writing subject group is situated in the School of Languages. The TCC project originated in, and was supported by the Research Unit: *Languages and Literature in the South African Context*, based at the Potchefstroom Campus. The Director of the Research Unit was instrumental in supporting this unconventional, exploratory and collaborative research project. This Research Unit also provided funding and made available the necessary infrastructure and support staff. The project was allocated additional funding by the School for Communication Studies and was encouraged and supported by the Dean of the Faculty of Arts. The TCC project was fundamentally interdisciplinary and as such, apart from outside participants, involved NWU staff

members from other subject groups in the School of Languages, Music and Communication Studies (Marley & Greyling, 2010:174).

These PLR projects contributed to the establishment of a Research Niche¹¹, entitled *Visual narratives and creative outputs through interdisciplinary and practice-led research* that would accommodate the History of Art, Graphic Design and Creative Writing subject groups. The first application for the establishment of this niche was submitted in 2008. Although this application was not successful, the evaluation panel deemed this to be an initiative with potential and granted it emerging research niche status. According to the evaluation panel, the following issues needed to be addressed:

- Staff qualifications needed to be improved.
- More articles needed to be published.
- The postgraduate throughput needed to be increased.
- A sustainable research culture needed to be developed.

To this end, funding from the Faculty of Arts was granted (generally referred to as "seed money") and henceforth all the research activities and projects were conducted under the umbrella of the emerging Research Niche. As will become evident from the subsequent discussion, these projects contributed to addressing these shortcomings. A second application to establish a research niche was submitted on the 30th of October 2012. This application was successful and the status of Research Niche was approved from January 2014. In accordance with the Evaluation Criteria, point 2.2.2 of the NWU Research Support Commission report, tabled at the Institutional Senate (August 2013) it was stated that;

The Commission was impressed by the strategies followed by this group, as well as their development over the past six years. They now have a clear focus,

¹¹ It should be noted that both the TCC and TBP projects were conducted before the official niche status was granted in 2013. Therefore, the term emergent Research Niche will be used in the context of this study.

of an interdisciplinary nature, and a coherent strategic plan. They have published at least seventeen articles during the past three years and have different projects in process, that will help them to keep this momentum. The current leader has a PhD, and there are enough qualified members of staff to meet the requirements of a niche area. They have a post-graduate programme, with an increasing number of Masters and Doctoral students. The field in which this group is working is not traditionally strong in terms of a research focus and usually few scholars in the field are able to deliver research driven publications. This is a national concern and in this field, the group seems to be breaking new ground (NWU, 2013).

Apart from the increased creative outputs, fourteen of the seventeen articles mentioned above were written in the TCC and TBP projects. Therefore, it could be concluded that these projects have helped to establish a position for arts-related PLR projects and contributed significantly to the establishment of the Research Niche within the NWU context.

In light of the above research context, the TCC project is discussed in the next section as the contextual background that informed the execution of the TBP project.

2.3 Overview of the *Tracking Creative Creatures* project as contextual background

The TCC project (2007-2009) was a response to the need of creative practitioners in the Graphic Design and Creative Writing subject groups to engage with the institutional research context in a way that would not negate creative practice. There was an intuitive understanding that collective engagement with creative practice and process could lead to insights that could be utilised in a more formal research context. This project was conceptualised and managed by Greyling (Creative Writing) and Marley (Graphic Design). The gradual realisation that the more theoretically inclined disciplines could make a valuable contribution to this project resulted in the involvement of the History of Art subject group during phase four of the TCC project. This was a significant step in facilitating research skills development and cooperation between theorists and

practitioners¹². Consequently, the project was conceptualised both as a collaborative creative and collaborative research project, with the following research objectives, to:

- stimulate creative outputs from a diverse group of participants;
- investigate and describe the creative process as it unfolded individually and within the group context, as well as during the course of the project as a whole;
- investigate and describe the creative process in terms of different approaches and within different disciplines;
- describe and analyse creative outputs by means of conceptual frameworks, and
- contribute towards the debate on PLR.

Additionally, the project was guided by the following principles: a contextual point of departure; an 'open' approach; the establishment of partnerships; freedom and voluntariness in terms of participation; creativity, originality and ingenuity; an approach of discovery; play and fun and the recognition of the creative process, final creative outputs and related research.

Although this was not realised at the time, these principles correlate with the methodological approach to PLR addressed in Chapter five. It is necessary to note that in terms of PLR, research methods are required to be flexible and are often developed and determined as the research and creative process unfolds (Scrivener & Chapman, 2004:1). Research in this context needs to be systematic and rigorous on the one hand as well as inventive and imaginative on the other in order to fully explicate the relevant knowledge modalities (cf. Sullivan, 2006:20).

The basic concept of the TCC project was to give a variety of artists the same creative stimulus as a starting point for their own creative process and production. As such, a set of nine drawings of composite creatures conceptualised by Joshua Marley (a five year old boy) and illustrated by Ian Marley (his father) served as the creative stimulus for the artists involved.

¹²*Tracking Creative Creatures: an interdisciplinary investigation into the creative process – project description* by Greyling and Marley (2009:1-30) provides a full description of the project.

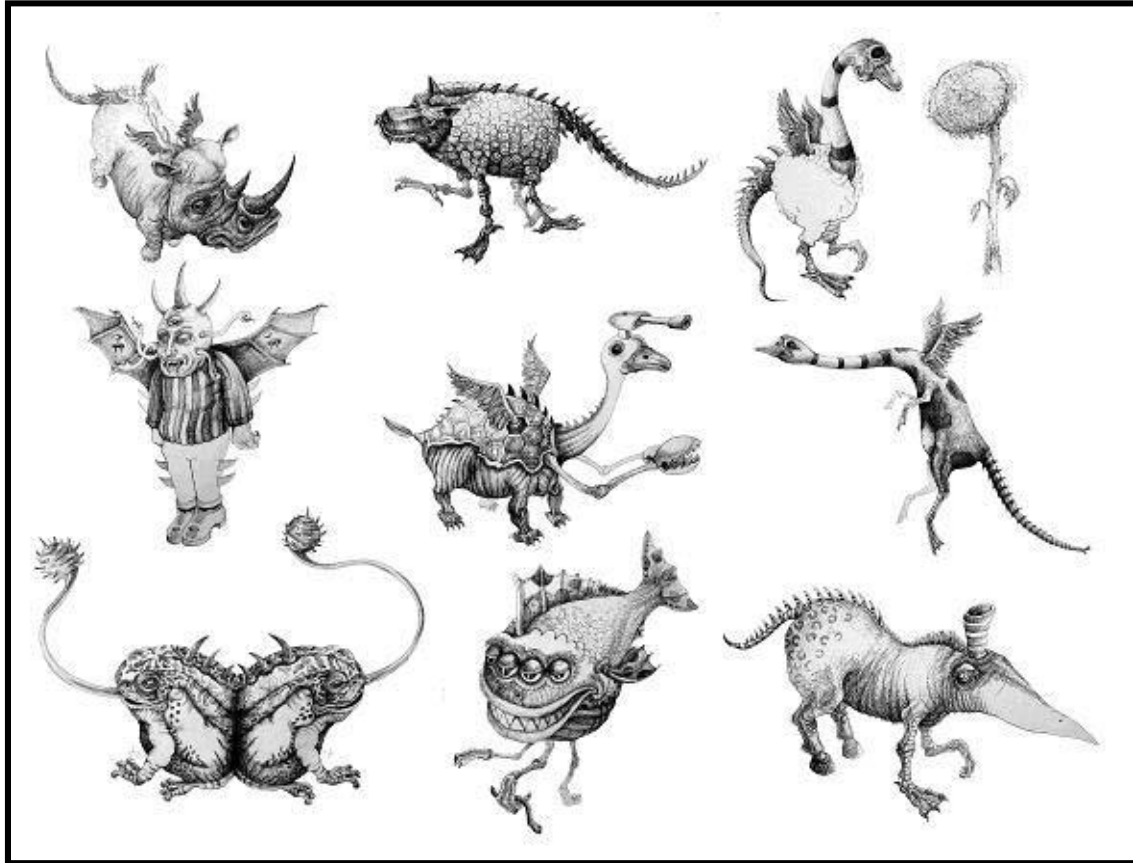


Figure 1: Original illustration for the *Tracking Creative Creatures* project

The invited artists' component involved a total of twenty-five established and up-and-coming artists from different disciplines (primarily visual arts and creative writing). A workshop and project launch was organised eight months prior to the exhibition (September 2007), which created an opportunity for artists to meet each other, gain clarity regarding the project and to exchange ideas. Artists had the choice to work independently, but were encouraged to collaborate, due to the interdisciplinary nature of the project. Participants were also invited to become involved in the research aspects of the project, which would involve the writing of articles to be published in accredited journals. In other words, the artists and researchers were offered an open agenda with very few restrictions. The basic concept was that the artists and researchers would either individually or collaboratively, explore the theoretical aspects of the creative outputs and related process work.

Additionally, various educational and community involvement activities were initiated. Graphic Design and Creative Writing students were involved in the project as part of

their teaching and learning programmes. Locally, three high schools, a youth development organisation and a private art centre participated. The broader community was involved by means of a creative writing competition hosted on the www.storiewerf.co.za website. As a result, more than 400 people were involved in this project (Greyling & Marley, 2009:19-20; Marley & Greyling, 2010:173).

The creative outputs of all the participants were exhibited at the *Aardklop* National Arts Festival held in Potchefstroom (24-29th September 2007). The exhibition included sculptures, artists' books, photographs, paintings, installations, music and creative writing. Additionally, poems written for the project were presented by means of audio-visual recordings and a collaborative cabaret was performed each evening at the venue. A process table, showcasing preparatory and process work of the artists and an audio-visual presentation of work created by learners from local schools, also formed part of the exhibition (Greyling & Marley 2009:18; Marley & Greyling, 2010:174). In order to comprehend the nature and scope of this project, the interactive digital catalogue produced for the project is included as Appendix 1.

As may be seen in the figure 2 below, the project's activities are divided and discussed according to four phases:

- phase one: conceptualisation, planning and preparation
- phase two: knowledge creation
- phase three: knowledge presentation and communication
- phase four: formalisation and dissemination of knowledge

Phase one concerned the conceptualisation, planning and preparation activities. (November 2006 to February 2007). The primary activities that were undertaken included clarification of the concept, acquisition of funding, identification and invitation of participants and organisation of the project launch. These activities required that the project managers and other stakeholders be involved in constant dialogue and negotiations in order to develop a shared vision and common understanding of the project. The aim was to create a group that had the relevant skills and experience to allow effective and innovative exploration and engagement with the theme. To this end, the project managers utilised their experiential knowledge of their respective creative fields when identifying potential participants. In other words, the project managers attempted to create an interdisciplinary collaborative team that had the potential to engender knowledge creation; mobilisation of this team occurred in the second phase.

Phase two, in which the creative production was undertaken, is considered as the knowledge creation phase (February 2007 to September 2007). As stated above, the purpose of this phase was to mobilise the collaborative team. The project launch was designed to fulfil this function. As such, this was a space for social interaction and dialogue during which the project objectives were shared with the group. During this phase, participants produced creative outputs and recorded their creative process.

After the creative productions were received, a variety of qualitative methods, inclusive of photography, video and sound recordings, was used to document the creative work. The idea was to extensively record all executed work in order to serve as a possible research resource. Implicit to the recording of the artefacts and related processes is the representation of the tacit knowledge dimension by both these aspects.

Phase three encapsulated the knowledge presentation and communication phase (September 2007). During this phase, the creative outputs and contextualising information were exhibited and performed in Potchefstroom at the *Aardklop* National Arts Festival (24-29 September 2007 in the old Snowflake Building). As mentioned earlier, this exhibition included a variety of creative executions encompassing a range of

different media and genres. During the course of the exhibition, walkabout discussions with the management team, artists and members of the public were arranged. This process created open and exploratory dialogue and enabled the recognition of conceptual patterns of meaning that underpinned the exhibition. The documentation of the exhibition and interviews with the artist continued during this phase.

Phase four consisted of the formalisation and dissemination of knowledge (October 2007 to September 2009). During this phase, the primary activity involved the formalisation of research in the form of colloquia, conference papers and writing of research articles. In pursuit of this activity, the artists involved in the project and other interested parties (particularly the History of Art subject group) were formally invited to become part of the research focus after the completion of the exhibition. The intention was to produce a special edition of the accredited journal *Literator* (2009:1[30]) in which articles stemming from the interpretation of the artworks would be featured. An informal research group, constituted by the History of Art, Graphic Design and Creative Writing disciplines, was formed in response to this intention. Explorative group discussions were then held, during which the context of the project was outlined and possible research foci and collaborative research opportunities were identified. Subsequently, the resulting project data were made available to all participants in order to inform the specific focus and approach for their research. These research processes and foci were progressively refined during further discussions. Meetings, during which the group members read and commented on each other's articles in progress, also gave researchers the opportunity to share their research findings and receive feedback. The submission and peer review selection process of these articles followed, allowing for further refinement. Ultimately, eight peer-reviewed articles were produced for the project-dedicated edition of *Literator* (2009:1[30]). Additionally, two project related articles written by Greyling (2009b) and Marley and Greyling (2010) appeared in other publications.

An appraisal of the TCC project was undertaken in order to illustrate the informative role this project played with regards to the TBP project. This is discussed below.

2.4 Appraisal of the *Tracking Creative Creatures* project

This appraisal of the TCC project is derived for the most part from three articles that dealt primarily with the management of PLR in the NWU context.

Tracking Creative Creatures: an interdisciplinary investigation into the creative process: Project description (Greyling & Marley, 2009:1-30) was the first article written about this project and served as an introduction to the special edition of *Literator* (2009:1[30]). The aim of this article was to provide an overview of the project and served additionally as a contextual frame of reference for the subsequent contributions. As such, the evolution of the project, including the context, conceptualisation, approach, methods, documentation, support structures, description of the various sub-projects, preliminary results and appraisal of the project, was discussed

The second article, *Tracking Creative Creatures in a research context* (Combrink & Marley, 2009:177-205), is the final article in the same edition of the *Literator* and served as a summative assessment of the management of the project. The aim of this article was to explore the concept of PLR as a viable research avenue for the disciplines involved. The article offers an evaluation of the project as a whole, in terms of its compliance with the principles of PLR, and proposes a possible management approach to facilitate further projects of this nature. Although this article makes a contribution in terms of evaluating the compliance with PLR, in retrospect, the management approach suggested is somewhat simplistic and does not adequately theorise the notion of managing knowledge.

However, regardless of the simplistic management approach suggested at that time, the research objectives that were set out for the TCC project were, for the most part, realised (Combrink & Marley, 2009:202-203). The first aim, to stimulate creative outputs from a wide range of participants, was clearly attained and the resulting outputs were exhibited at the *Aardklop* National Arts Festival held in Potchefstroom (24-29 September 2007). The second aim, which was to investigate and describe the creative process as it unfolded both individually, collaboratively as well as during the course of

the project as a whole, was also achieved. This is evident in the articles published in *Literator* (2009:1[30]) by Greyling (2009a:149-175), Greyling and Marley (2009:1-30), Louismarié, Combrink and Marley (2009:177-205) and Roela Hattingh (2009:125-148). The third aim was to investigate and describe the creative process in terms of the different approaches and within different disciplines. This aim was addressed in articles in *Literator* by Greyling (2009a:149-175) and Prof Hein Viljoen (2009:55-75). The fourth aim was to describe and analyse the creative outputs by means of theoretical frameworks. In this regard, articles by the History of Art theorists Dr M.C. [Rita] Swanepoel (2009:31-54) and Prof John Botha (2009:99-124) made a valuable contribution. The fifth and final aim, to contribute to the dialogue regarding PLR, was achieved through the articles by Greyling and Marley (2009:1-30) and L. Combrink and Marley (2009:177-205).

The third and most recent article, *Tracking Creative Creatures project: negotiating space for interdisciplinary practice-led research at the NWU* was written by Marley and Greyling (2010:162-174). The first part of this article provides an overview, conceptualisation, management approach of the project as well as an explanation of the creative and research foci. The second part elaborates on the manner in which the allowance and facilitation of space for various aspects and activities in such a project contributed towards research in the NWU context. These aspects included negotiating a space conducive to creativity and creative practice as well as developing a shared management vision in terms of branding and brand positioning. The way in which these aspects relate to the notion of knowledge management is also discussed. Attention is drawn to ways of utilising the potential of PLR as a collaborative enterprise, and project knowledge management in terms of knowledge generation, communication and dissemination.

As a whole, although various research objectives were initially formulated, the TCC project was a process of exploration and learning. Many of the theories and methods used in the management of the project were either discovered during the project or recognised after the fact. One such discovery was that the notion of the project as an

open ended exploratory journey was supported by the methodological approach to PLR. While most of the project's goals and objectives were met, to some degree, the formulation of these goals would have looked very different if we had previously had a more coherent theoretical understanding of PLR. The articles mentioned above aided in the development of such an understanding. However, it also brought to light the realisation that the management of multi-practitioner arts-related PLR needed to be investigated in greater detail. Therefore, these articles serve as the contextual background that informs the current study. A number of other realisations were also instrumental in the execution of subsequent projects.

Firstly, we realised that it is possible to conceptualise and conduct a multi-practitioner arts-related PLR project, which delivers creative practice and accredited research. Additionally, this project resulted in an increased awareness of PLR and a greater institutional willingness to allocate funding and resources based on the results achieved. This project thus started the process of negotiating space in the institutional context (NWU) for multi-practitioner arts-related PLR projects, and initiated further projects of this nature (Greyling & Marley, 2009:25; Marley & Greyling, 2010:180).

Secondly, the project was designed with the needs of creative practitioners in mind; therefore, a shared space was created in which creative practice was prioritised. Consequently, practitioners were more willing to participate and collaborate with other practitioners and researchers with the common goal of generating practice-led tacit knowledge in the form of creative outputs and the related documentation. The result was a significant increase in practice and accredited research outputs (Marley & Greyling, 2010:179-180).

In the third instance, with regard to more explicit communication of knowledge, various research related workshops and colloquia were held during the last phase of the project to facilitate research. Skills transfer and collaboration were encouraged during this process. The discussions and cooperation that occurred at various points expanded both knowledge and skills and thus contributed to capacity building. The insight gained

into the theory and practice of PLR was utilised in the Graphic Design and Creative Writing undergraduate and postgraduate curricula (Greyling, 2009a:149-176; Marley & Greyling, 2010:173/180). During the execution of the project, a more salient and critical understanding of management issues concerning projects of this nature was certainly achieved (cf. Combrink & Marley, 2009:177-205). Therefore, the TCC project informed the conceptualisation and execution of subsequent PLR projects conducted within the NWU context. Furthermore, the subsequent analytical review process allowed for the identification of certain critical issues, elucidated below (Marley & Greyling, 2010:179-180).

2.4.1 Identification of critical issues

The TCC project was initially conceptualised as an investigation of the creative process. Although some of the research outputs (Greyling, 2009a:149-176; Hattingh, 2009:125-148; Viljoen, 2009:55-75) addressed this aspect, it was not as central as anticipated. This could be ascribed to two factors. Firstly, practice-led projects of this nature tend to generate a diverse range of creative outputs and as a result, the theoretical issues embodied in the work and the research produced are difficult to pre-determine. Secondly, a better understanding of theoretical issues concerning creativity and the creative process by both the project leaders and the artists, who were asked to record their creative process, required this focus to be more succinctly addressed.

The most fundamental and problematic aspect was the absence of a working understanding and/or a definition of knowledge, in terms of PLR. Such an understanding would have guided the framing and management of research activities within the project (cf. Fahey & Prusak, 1998:2). A conscious understanding that some contributions would be personal and others formal research (cf. Chapters one, four and five) would have been beneficial. Additionally, an understanding of how creative outputs relate to the contribution of new knowledge in the formal research scenario would have aided the development of the project. The recording and presentation of these outputs might have been different had the position of the creative outputs and processes been defined as being of the tacit dimension of knowledge. This is important as I concur with

Niedderer (2008:10) who believes that tacit and explicit dimensions of knowledge are inseparable and need to be treated as such. As stated earlier, it is the contextualisation of this knowledge through words and the artefact that form a complementary and unified exegesis of knowledge (cf. Biggs 2003:6). A more comprehensive theoretical grounding would therefore have facilitated more effective knowledge management. Firstly, the project could have been more clearly embedded within a theoretical framework from the outset, which would have resulted in the inclusion of researchers from the fields of History of Art and Literary Studies occurring at an earlier stage, allowing them to contribute to the project's growth and development. Secondly, a better grasp of the different stages at which particular kinds of knowledge occur and are transferred in terms of knowledge generation and knowledge communication would have allowed for greater critical engagement and more effective identification of research possibilities. The participants would then have been given more relevant information regarding their roles in the project and the possible nature of their contributions; this might have allowed them to position themselves more comfortably within the project and equipped them better to utilise opportunities (Marley & Greyling, 2010:179-180).

To conclude, this discussion of the TCC project has demonstrated that interdisciplinary multi-practitioner arts-related PLR projects have the potential to build bridges between creative practice and written accredited research on creative outputs. However, an understanding of the tacit and explicit dimensions of creative practice is required in order to manage them effectively. It follows that such projects need to be understood in order to further facilitate and promotes the diverse nature and character of PLR within the creative disciplines. It was the above realisation that an appropriate management model was required that informed this research.

The next section provides an overview of the TBP project as contextual background for the project analysis of the same project by means of the TOKC, which is conducted in Chapter eight.

2.5 Overview of the *Transgressions and Boundaries of the Page* project

The TBP project (*an interdisciplinary exploration of a practice-led research project by means of the artist's book*) is a research project situated within the (then) emergent Research Niche entitled *Visual narratives and creative outputs through interdisciplinary and practice-led research*. As mentioned, this niche consists of the subject groups History of Art, Graphic Design, and Creative Writing.

As was the case with the TCC project, the basic premise of this project was to invite a group of artist to create work for an exhibition. This exhibition would then be documented and discussed by means of walkabout discussions, colloquia and workshops, with the aim of producing accredited research articles. The participants were viewed as a collaborative team that would explore the theme of the artist's book from different perspectives. These collective knowledge-generating activities were designed to afford a holistic picture of the theme.

Therefore, forty artists were invited to create artists' books for a travelling exhibition to be hosted at the Stellenbosch *Woordfees* (Word Festival) (1-6 March 2010), the NWU gallery in Potchefstroom (15 April-13 May 2010) and at the Faculty of Art, Design and Architecture gallery at the University of Johannesburg (2-30 July 2010).

Participants included established and upcoming artists who practice within the fields of visual arts (fine artists, graphic designers, illustrators) and creative writing (poets, novelists, children's book authors), as well as in the related fields of architecture and language technology. Many of the established artists, such as Diane Victor, Gordon Froud, David Paton and Leora Farber (fine artists) as well as Fanie Viljoen and Leon de Villiers (writers) to name a few, are leading practitioners in their respective fields.

Additionally, researchers who were interested in contributing to the project were also included in all the activities and communications. The History of Art and School of Languages subject groups at the NWU were specifically invited, as these entities made a significant contribution to the previous project. Other tertiary institutions that were involved through the participation of artists and researchers were the University of

Johannesburg; the University of Pretoria; the University of the Free State and Tshwane University of Technology as well as Vega, the Brand Communication School (in Johannesburg).

Another important dimension of the TBP project was the community development component. Consequently, the *Tambani*¹³ community project (based in Venda) and the *Karos & Kambro*¹⁴, a *Youth Development Organisation* (based in Promosa, Potchefstroom) were included.

In order to provide a more comprehensive picture of the project and its outputs, an interactive digital catalogue of the project is included (Appendix 2). Furthermore, the project's website may be accessed at <http://www.bookboek.co.za> for additional information, as well as the online version of *Literator* (2012:1[33]) at <http://www.literator.org.za/index.php/literator/issue/view/36>.

The general management approach to the TBP project was similar to that of the TCC project in that it was designed and planned to progress from creative outputs to accredited research articles over a three-year period. However, some significant adaptations were made due to the experience gained during the previous project.

2.6 Managerial adaptations made to the *Transgressions and Boundaries of the Page* project

As is evident from the discussion above, we had a more informed perspective of the execution of PLR projects at the beginning of the TBP project than at the time of undertaking the TCC project. The execution of the TCC project and a greater

¹³The *Tambani* embroidery project is a community outreach initiative that is managed by Dr Ina le Roux. *Tambani* is situated southeast of Musina in the Limpopo Province in the towns of Fholovhodwe and Muswodi-Tshisimani. For the purpose of the TBP project, the *Tambani* project created images of a traditional narrative embroidered by Venda women, which then formed the basis of a computer animation. The article by Dr M.C. [Rita] Swanepoel and Van der Westhuizen (2012) gives a full account of this collaborative interaction.

¹⁴Karos & Kambro is a non-profit national Youth Development Organisation that utilises the performing arts, nature, fun and adventure as part of an integrated skills development programme. This programme aims to promote and facilitate behavioural change, to stimulate a healing and transformation process in the lives of vulnerable youths. <http://www.karosandkambro.co.za/>

awareness of PLR methodologies had produced a consciousness of research processes, methodologies and the opportunities that arise during the execution of multi-practitioner arts-related PLR projects. In contrast to the TCC project, the management team was now aware of the distinction between tacit and explicit knowledge and the relationship of these knowledge dimensions to PLR. It should, however, be noted that at this point, the notion of knowledge management, and particularly the TOKC and the participatory paradigm, were not fully understood or integrated into the management of this project. It is for this reason that this study does not discuss the TBP project as an example of the application of the TOKC. Rather, this discussion of the TBP project serves as a support mechanism to the purpose of this study, which is to identify the appearance of salient aspects of the TOKC in multi-practitioner arts-related PLR projects in order to ascertain whether this could be an appropriate management model for future projects of this nature.

In light of the insights provided by the TCC project, a more detailed and rigorously theorised project proposal was written to substantiate and clarify the research approach and methodology (National Research Foundations *Blue Skies Funding Proposal*, October 2008) Appendix 3. The more informed theoretical foundation of this project was made certain by the inclusion of the History of Art subject group at the NWU, in the planning and execution of the project from the outset. Consequently, this subject group was represented in the management team by L. Combrink (History of Art subject group), in conjunction with Greyling (Creative Writing subject group) and Marley (Graphic Design subject group). Additional artists and researchers with expertise in PLR and artist's books were also identified to supplement this team as co-investigators.

This range of expertise was of particular importance because the artist's book was selected as a broad open-ended area of investigation that would more succinctly focus the creative outputs of this PLR driven project. Artist's books were specifically chosen as this art form allows for the creative interplay between image and text and functions outside of the constraints of the publishing industry. It follows then that they tend to be based on individual artistic vision, conceptualisation and execution. Therefore, it was

the ideal medium for involving artists from diverse disciplines through playful exploration and discovery of the possibilities and boundaries of the book. It was considered to be a genre that would facilitate PLR investigations. The selection of artist's books as the overarching theme thus satisfied the aim of demarcating an area of practice in which practitioners could pursue their creativity, resulting in creative outputs, which would eventually facilitate the production of research articles.

Specific provisions and research objectives were formulated to guide this pursuit. These took cognisance of the fact that PLR is an exploratory journey. With this in mind, provision was made for understanding and cognition to occur during the production of creative outputs and the related critical reflection. In other words, the notion that the artist and researcher may stumble upon unexpected and surprising results, informed the following research objectives and provisions (cf. Sullivan, 2011:100; Borgdorff, 2011:56/57; Smith & Dean 2009: 22).

Greyling *et al.* (2012:2) articulated the specific research objectives as being intended to:

- create an interdisciplinary, conceptual and functional space for creative practice. The purpose of this space was to allow participants to engage in collaboration and creative practice and generate artefacts from which additional explicit research outputs could be generated;
- utilise the group dynamics to stimulate interdisciplinary research;
- empower practitioners to situate their practice as research by facilitating an understanding of the nature, practice and methodologies of PLR;
- critically reflect on and evaluate the process and structure of PLR in order to yield accredited research outputs
- create a body of research that would contribute to the national and international debate concerning the nature and stature of PLR.

The project made provision for:

- artists who wanted to pursue their creativity by making an artist's book.
- artists who wanted to do research on their own creative practice.

- researchers who wanted to reflect on the creative process, concepts and results of creative practice.
- collaboration between artists and researchers to the mutual benefit of both.
- the establishment of an accommodating and trusting research culture amongst members of the participating disciplines at the NWU.

These objectives and provisions guided the TBP project as a whole. The project description that follows serves as contextual background to the theoretical foundation and analysis according to the TOKC, as described in Chapter eight. In other words, the salient activities and issues mentioned here are supplemented by a more detailed and theoretically informed discussion in Chapter eight. This project is described according to the same phases applied to the description of the TCC project, namely:

- phase one: conceptualisation, planning and preparation (August 2008-March 2009)
- phase two: knowledge creation (March 2009-January 2010)
- phase three: knowledge presentation and communication (February 2010-July 2010)
- phase four: formalisation and dissemination (July 2010-December 2011)

Figure 3 affords an overview.

2.6.1 Phase one; conceptualisation, planning, and preparation (August 2008-March 2009)

This phase of the project started with discussions concerning the conceptualisation and planning of the project and ended with the project launch on the 4th of March 2009. Although the TBP project officially ran from 2009 to 2011, many of the ideas and concepts originated, and were, in fact, discussed, much earlier. As stated, the experience gained from the TCC project informed the theoretical underpinning, conceptualisation, planning and management of this project. Additionally it provided a model (Combrink & Marley, 2009:177-205) for further exploration. This meant that the project managers had a theoretical framework that aided the practical execution of the project. A supplementary benefit was that the previous project facilitated and contributed to a conducive working relationship between the History of Art, Graphic Design and Creative Writing subject groups.

One of the early topics of discussion between Greyling and Marley was how to design a project suitable for the History of Art, Graphic Design and Creative Writing disciplines. This was informally discussed on several occasions during which the notion of using the artist's book as a cohesive element to pull together the various facets of the project was decided upon. The reason for this was that there were several artists' books on the TCC exhibition, which informed our understanding of the genre. In this context Greyling had done extensive research for her artist's book entitled *Avontuur* (cf. Greyling, 2009b) created for the TCC project. Marley had also created artist's books prior to this undertaking and had taken part in artists' book exhibitions in the past. Thus, he was familiar with both the genre and many of the South African artists working in this area of practice. These experiences led to the realisation that an artists' book exhibition was appropriate due to the characteristic interplay of image and text and the reading thereof. An additional consideration was that the artist's book is typically a self-contained unit, which would allow for easier documentation and transportation of the exhibition.

The impetus to formalise the initial discussions was provided by the October 2008 National Research Foundations, (Blue Skies Funding Proposal: Appendix 3) deadline.

This required that the management team clarify salient aspects of the project; such as problem identification, rationale and motivation, project description, research aims and objectives, research methodology, work plan and budget. Consequently, the conceptual underpinning and research objectives and aims were refined and possible participants, resources and collaborative opportunities were identified. Although this funding application was unsuccessful, it served as the basis for additional funding applications. For example, a funding proposal, which focused specifically on the community development aspects of the project, submitted to the National Arts Council in January 2009 was successful. The project also received funding from the NWU, and the Afrikaanse Taal- en Kultuurvereniging (Afrikaans Language and Culture Association).

Another topic of discussion was the envisioned collaborative possibilities and the documentation and dissemination of knowledge. C.E. [Wessie] Van der Westhuizen (a lecturer in Multimedia and Graphic Design at the NWU) had designed the digital catalogue for the TCC project and was therefore aware of the importance of showcasing the creative outputs as a valuable part of the research process. A meeting was arranged with Van der Westhuizen in November 2008 for the purposes of discussing the use of social media to communicate relevant aspects of the TBP project, initiating interaction and recording the project's development. The notion of using Facebook, blogs and databases was explored and the possibility of producing digital and print catalogues as well as a webpage was discussed. The conclusion reached was that it would be prudent to conceptualise the catalogues and webpage as complementary aspects in order to avoid the duplication of information and workload. These discussions eventually led to the development of a webpage titled bookboek.ac.za. This webpage detailed the curriculum vitae of the artists, their artist's statements, descriptions of the book concepts and photographs of the creative productions.

Additionally, a meeting was held with Farber (director of the Visual Arts Department Research Centre at the University of Johannesburg and Paton (Senior Lecturer: Drawing, Studio Practice & Postgraduate Studies) in November 2008. The purpose of this meeting was to initiate inter-institutional collaboration and build ties with the staff at

the University of Johannesburg in order to utilise their expertise to the benefit of the project. The insights that Paton could offer were regarded as particularly significant as he is an artist and academic who had produced and published work on the artists' book. He also manages a website (<http://www.theartistsbook.org.za>) "which explores research, practice, production, collecting and documenting of artists' books in South Africa". Farber, who is also an accomplished artist, has been instrumental in contributing to the debate and development of PLR. She organised the 2009 *On Making: Integrating Approaches to Practice-led Research in Art and Design* colloquium and edited the subsequent publication with the same title (Farber & Mäkelä, 2010). Paton provided us with a list of book artists, who might be interested in participating. Both Farber and Paton were invited to participate and give presentations at the launch of the project. During a post meeting reflection, I formulated the following questions; they were not designed as a formal academic process but rather to stimulate discussion:

- How does one create space that allows various modes of operation, and participation, which will eventually result in innovative creative work and formal research?
- How does one effectively manage a project such as this one, in order to gain maximum benefits, without destroying the fun and exciting nature of the project?
- What are the maximum benefits for the participants?
- How is the process involved in making artists books indicative of PLR?
- How does one utilise practice-based methodologies to foster collaboration between researchers and practitioners, which will have benefit for both parties?
- How do the nature of the artist's book and the notion of PLR intersect? Is there something in the making and investigation of such books that parallels, or could be seen as metaphorical, of the research process?

These questions were later discussed with Greyling and informed some of the decision-making processes. For example, the first and second questions are related to the topic of this study as well as an article entitled *The Tracking Creative Creatures project: Negotiating space for interdisciplinary practice-led research at North-West University* (Marley & Greyling, 2010: 169-182).

During January 2009, the planning and organisation for the project launch continued and the preliminary list of participants, invitation letter and launch programme were finalised. During subsequent discussions, we had ensured that there was an equitable balance between visual artists, writers and researchers. The letter of invitation and additional information was sent to the potential participants on the 12th of January 2009.

Launch-related administrative issues such as the booking of venues, finalisation of legal contracts, catering and transport arrangements were also finalised. The inclusion of the project in the 2010 *Woordfees* was also confirmed with the festival director.

Furthermore, the branding of the project was instrumental to its execution. As was the case in the TCC project, we tried to create a common “headspace” (Gad, 2001:22) that existed as a cohesive picture in the minds of the participants. The project was thus positioned as a creative exploration, which would result in new knowledge. In this context I concur with Lamos (2005:31) who states that brand positioning provides:

...the mental hook for customers, prospects, employees, suppliers and all the other people we try to communicate with, to properly receive and store our information. It makes that information understandable and acceptable. It provides the foundation and frame of reference for what they should expect from us (Lamos,2005:31).

In this context, Van der Westhuizen had designed the logo for the TBP project with its positioning in mind. The logo was based on a Rorschach test, which is normally created by folding ink marked pages to create a reflected image, often causing the ink to spill over the edges of the page. Each Rorschach test is different and is differently interpreted by each individual. Therefore, it was felt that this logo, in combination with the project title, reflected the exploratory nature of the project. This branding of the project influenced all communication and helped the participants understand what was expected of them.

Having established this, the project launch took precedence. A preliminary programme for the launch on the 4th of May was drafted and all the participants were invited to attend the event. Arrangements were made to have the launch video-recorded. This video was later distributed to those participants who were unable to attend. The basic purpose of the launch was to contextualise the project and communicate any relevant information while also creating the opportunity for dialogue. Therefore, the programme was designed to give participants a contextual background to the nature of this research project, the artists book (as art form) and the PLR.

Project files were prepared for each participant for distribution at this launch to help in creating a shared vision and to aid the contextualisation of the project. These files contained, firstly, a list of all the participants and their contact details so that artists could contact other participants and arrange collaboration if they so wished. Secondly, a list of web resources, an article on PLR by Combrink and Marley (2009) and an unpublished paper on artist books by Paton, were included to contextualise the theoretical point of departure of the project. The digital catalogue of the TCC project, which contained all the creative and theoretical work, was also placed in these files to serve this goal. Thirdly, administrative documents, such as the contract to be entered into with the artist, and transport claim forms were included.

As was the case in the TCC project, TBP project managers made use of this phase to put together an interdisciplinary, collaborative team that had the potential to creatively and critically engage with the project theme. At this stage all the conceptualisation, planning and preparation was in place and the field of interaction needed to be mobilized in order to initiate knowledge creation in phase two.

2.6.2 Phase two; knowledge creation (March 2009 - January 2010)

Although the project launch is included in phase two of the project, it is in essence an intermediate transitional zone of activity between phase one and two. As such, the project launch represents the culmination of the conceptualisation, planning and preparation phase and the beginning of the knowledge creation phase.

Social interaction was an important aspect of this phase of the project. Consequently, events such as the project launch and workshops were utilised to initiate interpersonal interaction and collaboration. Therefore, the primary activities during this phase were the project launch, workshops and collaborative and individual creative productions. These productions were regarded as tacit knowledge from which further research was derived.

The launch programme and proceedings were specifically designed to give a contextual background regarding the research objectives, artists' books and PLR. To this end, five presentations were given. Marley addressed the operational, creative and research aspects of the project. The notion of artists' books was contextualised by Prof John Gouws¹⁵ who presented a lecture titled *a brief history of the book*. Paton's lecture, also on the topic of artists' books, was entitled *Towards an understanding of what a SA artist's book may be*. L. Combrink gave an overview of PLR while Greyling discussed the PLR aspects of making her artist's book *Avontuur* (cf. Greyling, 2009b). In line with the notion of branding, this extensive contextualisation of the project was important to establish a degree of shared common understanding.

Ample time was also allowed for discussion and the forging of collaborative partnerships. These discussions led to a number of collaborative initiatives. For example, the following two workshops that were proposed at the launch came to fruition. Firstly, a bookbinding workshop was presented by Stephan Erasmus¹⁶ (a pre-eminent book artist) on the 5th and 6th of June 2009. All participants were invited to attend this collaborative learning opportunity. Secondly, a creative writing and book-making workshop was held with *Karos en Kambro* community development project in Promosa on the 25th and 26th of September 2009. Flip Hattingh (a South African Fine Artist),

¹⁵ John Gouws is a professor extraordinary associated with the Research Unit for *Languages and Literature in the South African Context* situated in the School of Languages at NWU, Potchefstroom.

¹⁶ Erasmus is a Johannesburg based artist, lecturer and curator who works within the artist's book genre. <http://www.stephanerasmus.com/>

Anneretha Combrink (PhD student in creative writing at NWU) and Greyling presented this workshop.

Another collaborative aspect of the TBP project was the production of the computer animation *The Greedy Hippo*. Dr Jaco Kruger of the School of Music at the NWU, Potchefstroom Campus and Dr Ina Le Roux, Manager of the *Tambani* Project, co-ordinated the production of embroidered images derived from traditional Ngano folk tales. Women working in the *Tambani* community outreach initiative produced these images. Van der Westhuizen then used these images to create a digital animation. This process is explained in detail in an article titled *The Tambani project: A computer animation of The Greedy Hippo* by M.C. [Rita] Swanepoel and Van der Westhuizen (2012).

The concept website was also introduced to the participants at the project launch; they were requested to send us biographical information and artists' statements. The development of the webpage and other social media platforms, such as Facebook, was an ongoing topic of discussion between the project leaders and Van der Westhuizen. As a result, numerous discussions concerning the webpage function and architecture were held. The final webpage has a relatively standard format that consists of a project description, information on the artist and researchers, images of the creative production, community project information and useful links to other related websites. This webpage (www.bookboek.co.za) eventually went online in July 2009 and an additional Facebook group was created. These social media platforms were periodically updated during the course of the project.

In March 2009, Greyling attended the 2009 *Woordfees* to present a writing workshop. This experience was very useful as it allowed her to discuss the format and extent to which the TBP project would be included in the 2010 *Woordfees*. While there, Greyling had the opportunity to scout for possible exhibition venues and met the festival organisers and other relevant parties concerning the project. Additionally, Amanda Botha, the Visual Arts coordinator of the 2010 *Woordfees*, requested additional information about the TBP project. An edited version of the National Research

Foundation TBP funding proposal, the TCC digital catalogue and *Literator (2009:1[30])* were provided as contextual information.

For the most part, this phase of the project was dedicated to the production and documentation of artists' individual and collaborative creative practice. Various activities that would assist with the production process were planned and executed. In June 2009, a meeting with the History of Art, Creative Writing and Graphic Design subject groups was held. The purpose of this meeting was to discuss participants' progress to date, and to inform the participants about upcoming workshops and theoretical resources and databases that had been created and which were available to them.

In June 2009, Greyling attended the Cape Town book show. While in Cape Town, she had several informal meetings and discussions with participants in the TBP project who were also in attendance. They discussed the artists' individual productions as well as the possibility of participation in panel discussions, which were to be part of the *Kunsfees* discussion series at the *Woordfees* in 2010. Additionally, Greyling held a meeting at the *Woordfees* offices to discuss the marketing of the exhibition and exhibition venues.

During the course of 2009, various informal and formal discussion and information sessions were held. On one such occasion, L. Combrink and Greyling gave presentations about various aspects of the project at a colloquium hosted by the Research Unit: *Languages and Literature in the SA Context* at the Potchefstroom Campus on the 14th and 15th of October 2009.

In the meantime, exhibition (Stellenbosch *Woordfees* 1-6 of March 2010) related information and documentation, such as a project description, programme information and press releases, were prepared. Additionally, artists' information, which was to accompany the books on exhibition, was compiled.

The books were received in the last week of January 2010 after which these books were extensively documented by means of photography, video and in the case of creative writing, some works were narrated and recorded. February 2010 can be considered the

final stage of this second phase and involved further documentation of the books and the packaging and transportation to Stellenbosch for the *Woordfees*.

2.6.3 Phase three; knowledge presentation and communication (February 2010 - July 2010)

This phase was primarily concerned with the exhibitions and related activities. The artists' books, which were considered tacit knowledge, were presented in combination with additional information provided by the artists, at the following exhibitions: Stellenbosch *Woordfees* (1-6 of March 2010), the NWU Gallery at the Potchefstroom Campus (15 April to 13 May 2010) and at the Faculty of Art, Design and Architecture Gallery at the University of Johannesburg (2-30 July 2010). This was the first time we were able to view all the books in the same space and thus able to take the opportunity to identify themes and patterns of meaning.

The TBP project exhibition at the Stellenbosch *Woordfees* was held in the Africana Room of the J. S. Gericke library at Stellenbosch University. Greyling, Jaco Burger (project assistant) and Marley acted as guides during the exhibition. Various walkabout discussions were held with members of the public and design and illustration students at Stellenbosch University. Additionally, two more formal discussions and presentations were included as part of the *Woordfees* programme. The first, TBP: *Artists in discussion* was held in the J. S. Gericke Library auditorium. This involved a discussion of the exhibition by five participating artists (Strijdom Van der Merwe, Danie Marais as well as Kabous Meiring, Greyling and Marley). The second was presented by Greyling and Marley in the same venue and was entitled *Creative research projects: how is it possible?*

The exhibition of this project held in Potchefstroom at the NWU Gallery (15 April-13 May 2010) involved similar activities. During the course of the exhibition and walkabouts discussions were held with History of Art, Graphic Design and Creative Writing students. At this stage, in the last week of April, the project leaders decided to have a meeting to initiate the research process. This meeting was held in the gallery with the History of Art, Graphic Design and Creative Writing subject groups, the purpose being to initiate

discussion and to identify possible research themes. This was an open, exploratory meeting in which many themes were identified and discussed. A follow up meeting was held the next week in the same venue, during which Marley gave a presentation on the emergent research possibilities in projects of this nature and identified a number of tentative themes in order to facilitate a group discussion. Additionally the participants were informed about the theoretical resources and project documentation that was available for their research. The initial process was to encourage participants to write informal articles that would be included in a printed exhibition catalogue. In other words, participants were encouraged to write informally about their creative process or other theoretically orientated aspects of the project without the added pressure of the accreditation process. The deadline for these articles was the second week of September 2010, while the design layout and printing was completed by March 2011. Twelve of the sixteen articles for the catalogue were written by artists as reflections on some aspect of their own creative process and production. As such these articles are derived from tacit experiential learning and converted into a more explicit/textual knowledge format (Greyling *et al.*, 2011).

The final exhibition of the project took place at the Faculty of Art, Design and Architecture Gallery of the University of Johannesburg (2-30 July 2010). This exhibition was a further opportunity to engage with the physical books, and various walkabout discussions were held with University of Johannesburg Art and Design students. This exhibition marked the end of phase three of the project. As mentioned, the webpage and Facebook groups were continually updated and the exhibition was extensively documented by means of photography and video at all the venues.

2.6.4 Phase four; formalisation and dissemination of knowledge (July 2010 - December 2011)

In this phase, the majority of activities and events were focused on the creation of explicit knowledge. As such, this phase could only be initiated after the completion of the exhibitions and was essentially focused on research activities, such as research discussions, colloquiums, research workshops and the writing of accredited articles. As

will become evident from the discussion below, these activities were designed and coordinated to facilitate a progressive move towards accredited research. The reasoning behind this was to facilitate knowledge and skills transfer in order to empower participants so that they may gain/acquire research and writing abilities.

Consequently, the following research activities and outputs were planned and executed: a series of research discussions; a research colloquium concerning the research context at the NWU and the strategic plan for the then emergent Research Niche in the NWU context (6 April 2011); a research writing workshop (13 June 2011); a research colloquium specifically concerned with the TBP project (13-15 July 2011) and an edition of the journal *Literator* (2012:1[33]), dedicated to the project (article submission deadline 30th of August 2011). These activities are discussed in more detail below.

The first, a series of research discussions, was held during the course of 2011. These occurred approximately once every three weeks and were primarily concerned with the refinement of research for the above-mentioned catalogue, colloquiums and edition of *Literator* (2012:1[33]). During one such discussion session, on the 18th of February 2011, Marley presented the completed digital catalogue to staff in order to contextualise the project as a whole and to inform them of the subject matter that was available for further research. During an additional session held on the 11th of March 2011, preliminary abstracts for articles by participants were presented and discussed. These discussion sessions moved progressively towards accredited research outputs.

On the 6th of April 2011 a research colloquium was organised by Dr MC [Rita] Swanepoel during which Prof Amanda Lourens (Vice-Rector: Research and Planning) and Prof Jan Swanepoel (Dean of the Faculty of Arts) gave presentations concerning research in the NWU context and research in the humanities. Additionally, Marley made a presentation concerning the research activities within the emergent Research Niche.

On the 13th of June 2011 a research writing workshop was presented by Dr MC [Rita] Swanepoel and Prof H.F. [Herrie] Van Rooy (an experienced researcher from the

Faculty of Theology) in order to assist with the writing of articles. Van Rooy agreed to read and give feedback on the articles on which participants were working on. These individual feedback sessions were of great benefit to many of the participants. It should be noted that many of the participants within the History of Art, Graphic Design, and Creative Writing subject groups also worked collaboratively and read and commented on each other's articles.

From the 13th to 15th of July 2011, the TBP project research colloquium was held. This was an important event as it was the first research colloquium linked to a PLR project within the emergent Research Niche. The purpose of this event was to allow participants to present their research with a view to getting feedback and assistance. However, of equal importance was that artists were encouraged to discuss their creative production and final creative outputs. The majority of presentations dealt with some aspect of practice as research. Institutional cooperation was also evident at this event as Brandon Grey and artist and lecturer Gordon Froud from the University of Johannesburg, as well as Leti Kleyn from the University of Pretoria were amongst those to deliver presentations. All the proceedings were documented on video and formed part of the collection of research resources. The print catalogue produced for the project, which contained more informal articles and an interactive DVD was launched at this event.

The culminating activity for this project was the writing of articles for *Literator* (2012:1[33]). The deadline for article submission was the end of August 2011. This edition of the journal contained twelve articles, nine of which were written by participants from the History of Art, Graphic Design and Creative Writing subject groups. Interestingly, due to changes in the publishing policy of the *Literator*, this was the first edition to be published online¹⁷. This meant that instead of including a digital catalogue (DVD) with the publication, readers were now given a link to the project website where they could view the artefacts in more detail. In keeping with the notion of valuing creative

¹⁷Although this edition of the *Literator* (2012:1[33]) appeared online, the project leaders had 30 copies printed.

production the *Litera* section of this publication also included some creative writing created for the project.

All of the above mentioned articles elaborated on a particular aspect of the TBP project. In terms of a project appraisal, the amount and quality of creative outputs, exhibitions, and articles are indicative of a successful project. Therefore the aim of creating space for creative practice that would lead to accredited research outputs was realised. Additionally the creative practice and related critical contextualisation, which resulted in accredited research articles, allowed participants to explore and contribute to the debate surrounding PLR. The specific contribution of each article will be explored in more detail in Chapter eight.

2.7 Conclusion

As stated in the introduction, the aim of this chapter is to describe the multi-practitioner arts-related PLR projects conducted at NWU, Potchefstroom Campus to highlight the historical and contextual approach to these projects. As such, the TCC project is discussed as contextual background since significant experiential learning took place during the execution of this project. Specifically, important issues such as a need to embed the project in a more theoretical understanding of PLR and the inclusion of the History of Art subject group were addressed from the outset of the TBP project – of which an overview has been given. This overview informs the project analysis that is conducted according to the TOKC in Chapter eight.

However, before this analysis can take place, salient issues, such as the conceptualisation of knowledge in terms of PLR and the TOKC need clarification. Tacit knowledge (Polanyi, 1958; 1962; 1966a; 1966b) and reflective practice (Schön, 1983; 1987) are of particular importance to this line of thinking as they are essential concepts to understanding PLR. Michael Polanyi (1958; 1962; 1966a; 1966b) coined the term tacit knowledge and analysed the structure and function thereof. Schön (1983, 1987) elaborated on the work of Polanyi and conceptualised the notion of reflective practice, premised on an epistemology of practice. As mentioned before, of significance

is that Polanyi (1966a:17-18) considers tacit knowledge as the personal aspect of any explicit knowledge and argues that both dimensions must be considered in order to be able to gain a holistic understanding of knowledge. Consequently, the following chapter addresses the conceptualisation of these two concepts.

CHAPTER THREE: TACIT KNOWLEDGE AND REFLECTIVE PRACTICE**3.1 Introduction**

In Chapter two, a narrative description of the multi-practitioner arts-related practice-led research (PLR) projects conducted by the subject groups History of Art, Graphic Design and Creative Writing at the North-West University (NWU), Potchefstroom Campus was given. This narrative is essential as contextual background. It informs and is referred to in subsequent chapters.

In this chapter, the notion of tacit knowledge and reflective practice is important as the conceptualisation and utilisation of this kind of knowledge forms the foundation of my research on the management of multi-practitioner art related projects by means of PLR. The theoretical framework presented by Michael Polanyi (1958; 1962; 1966a; 1966b) in the conceptualisation of tacit knowledge has exercised widespread influence on a diverse number of fields such as research methodology, institutional economics, psychology and adult learning (Gourlay, 2002:1). In terms of this research, tacit knowledge is of significance with specific reference to reflective practice, PLR and knowledge management. However, in the literature on PLR and the theory of organisational knowledge creation (TOKC), authors tend to use a generalised definition of tacit knowledge without elucidating the underlying structural dimension thereof. The reasons for this may be that the authors have an implicit understanding of the concept and do not deem it necessary to explicate in more detail. Nevertheless, in the context of this study, a more finely grained discussion and understanding of tacit knowledge is required to expose its epistemological foundations and substantiate my line of reasoning.

In my research, one of the important aspects investigated was how to utilise the tacit dimension in both PLR and the TOKC. While Polanyi's concepts are of fundamental importance, he does not significantly address the issue of accessing and utilising tacit knowledge, and it is in this area that Donald Schön (1983; 1987) makes a valuable contribution. Schön's (1983) conceptualisation of the reflective practitioner relies on the notion of tacit knowledge in that it foregrounds reflective practice as a knowledge

generating activity and advocates an epistemology of practice. Additionally, the work of Schön has significantly impacted on PLR because the creative disciplines have adopted his notion of the practitioner's activities as a valid research method (Gray & Malins, 2004:22).

In terms of knowledge management, (discussed in Chapters six and seven), Nonaka *et al.* build on the thinking of both Polanyi and Schön for their conceptualisation of the TOKC (cf. Nonaka, 1994; Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998; Nonaka *et al.*, 2000, 2006, 2008; Nonaka & Toyama, 2003, 2005; Nonaka & Von Krogh, 2009). They developed a specific model that utilises individual tacit knowledge which is amplified, enriched and converted into explicit knowledge by means of social interaction and which is shared with the rest of the organisation (Nonaka, 1994:14).

In order to succinctly explicate further the nature and role of tacit knowledge in reflective practice, as exhibited by multi-practitioner arts-related PLR projects, this chapter is divided into three sections. The first section gives a brief overview of the knowledge context. This broad overview of the development of Western thought serves to position the thinking of both Polanyi and Schön within a non-reductionist view of knowledge. This broad overview of the development of Western thought and the research paradigms that emerged as a result, serves to position a more detailed discussion of the research paradigms presented in Chapter four. The second section deals with the conceptualisation and structural dimensions of tacit knowledge (Polanyi, 1958; 1962; 1966a; 1966b). Aspects such as the focal, proximal, and semantic aspects of tacit knowledge are introduced and explicated. Additionally, the notion of indwelling and the modes of communicating tacit knowledge are discussed. This discussion forms the conceptual foundation of the concepts introduced in the next section. The third section is concerned with reflective practice (Schön, 1983; 1987) and the related methodologies of reflection-in-action and reflection-on-action as well as the utilisation of reflective practicums. Reflective practice, in terms of the management and design disciplines, also forms part of this discussion.

3.2 A brief introduction to the emergent knowledge contexts

The purpose of this section is to indicate the contours of the major thought patterns that have shaped the Western conceptualisation of knowledge and led to the current research paradigms. This is important as it contextualises and substantiates the utilisation of experiential and tacit knowledge in the academic milieu.

The modern worldview and subsequent development of Western thought is a result of the complex intermixing and cultural interpretations of the Renaissance (14th-17th centuries), the Reformation (16th century) and the Enlightenment (17th-18th centuries) as well as the Scientific Revolution (16th-18th centuries). According to Tarnas (1991: 366) two distinct streams of thought emerged from these events. On the one hand, there is the rational, empirically scientific stream that would lead to the sceptical secularism which was informed and influenced by the Scientific Revolution and Enlightenment. In this stream, empirical observation and human rationality were used to understand the world and would eventually lead to the positivist research paradigm associated with the natural sciences.

The other stream, rooted in the classical Greco-Roman and Renaissance cultures, is more Romantic and humanist in nature. In these cultures, self-expression, creativity and the imaginative powers of humankind in the service of spiritual aspirations were valued. This stream is principally aligned with and informs the interpretive research paradigms that are associated with the humanities and that accommodate the notion of tacit knowledge. Therefore, the Romantic and scientific streams could be viewed as a paradoxical, inverse reflection of each other. In the subsequent sections, I briefly discuss the development of these two streams. The scientific stream of thought is discussed first; thereafter, the Romantic stream.

The Renaissance was the period in which Europe emerged from the High Middle Ages (11th-13th centuries) and during which human consciousness and culture were reborn.

Four inventions from this period greatly contributed to the sense of human empowerment characteristic of the Renaissance. The first of these was the magnetic

compass that allowed European explorers to navigate the globe. The second was the discovery of gunpowder that brought about the end of the feudal order and promoted the rise of nationalism. Thirdly, the mechanistic clock was developed. This influenced the manner in which people related to time, nature and work. The result was the supplanting of the rhythms of nature as a regulatory factor. The last influential invention in this context was the printing press. It broke the clergy's stranglehold on knowledge and learning and allowed the development and distribution of individual, religious and secular knowledge. Therefore, the Renaissance is viewed as the vanguard of the new age in which humankind was capable of exploring the globe and discovering new territories, penetrating and reflecting upon the secrets of nature and the cosmos. Additionally, art reached hitherto unrivalled levels of sophistication while the use of linear perspective and other techniques allowed for naturalistic visual interpretations. More rigorous empirical investigations of nature and the cosmos emerged due to developments in science and mathematics (Marien & Fleming, 2005:262, 270-274; Tarnas, 1991:224-225).

The reformation, initiated by the Augustinian monk Martin Luther (1483-1546), led to a split in the Roman Catholic Church and gave rise to Protestantism. Luther was disillusioned with the institutionalised church and wished to return to the redeeming power of God as revealed in the Holy Scripture. The reformers viewed the Roman Catholic Church as too controlling and restrictive and advocated the individual's autonomy to communicate with God directly. The Reformation and Protestant spirit took hold in the Northern parts of Europe and resulted in a challenging of the old order. Ironically, the Protestant movement's initiation of individual autonomy would lead to religious scepticism. The fact that God and religion could be differently perceived also meant that the world could be perceived differently. As such, the Scientific Revolution arose out of the ensuing religious chaos that would engulf Europe. During this time, even humanity's position, as the God sanctioned beings at the centre of the universe, was questioned. Nicolaus Copernicus (1473-1543) began the process of replacing the geocentric concept of the universe with a heliocentric model. This process was further developed and substantiated; most notably by Johannes Kepler (1571-1630), Galileo

Galileo (1564-1642) and Isaac Newton (1642-1727). This meant that earth (and in essence, humankind) was no longer the centre of the universe with the other celestial bodies revolving around it, but rather earth was one of several planets revolving around the sun. According to Tarnas (1991:259), the actualisation of the heliocentric worldview, which was reliant on empirical findings, created a schism between religion and science initiated the journey towards intellectual independence, unhindered or controlled by religion. René Descartes (1596-1650) made the first concentrated attempt to apply the new methods of science to theories of knowledge, and in doing so, laid the foundations for modern philosophy. The central point of his philosophy was that whatever is clearly and distinctly thought, must be true. This he drew from his own existence, enabling him to construct a proof of God's existence (Chambers, *et al.*, 1987:570; MaGee, 1998:84-89; Blackburn, 2005:95-96). Descartes' mind-body dualism, or Cartesian split, was instrumental in initiating the twin epistemology of rationalism and empiricism, which would strongly influence the Western worldview. His dictum *Cogito ergo sum* (I think, therefore I am) gave rise to knowledge based upon reason as the way to understand the human's place in the universe in the seventeenth century.

Therefore, the Renaissance, Reformation, Enlightenment and Scientific Revolution resulted in a fundamentally different conceptualisation of the universe in which empirical observations, not religious doctrine, were increasingly valued as a means to understand it. In this context, human faculties and scientific measurement (empirical data) were used to understand nature and the purpose of science was to align nature with the human's will. This progression towards secularism and independent thought would reach its logical conclusion in the thinking of Arthur Schopenhauer (1788-1860), Auguste Comte (1798-1857), Ludwig Feuerbach (1804-1872), John Stuart Mill (1806-1873), Karl Marx (1818-1883), Hermann Ludwig Ferdinand von Helmholtz (1821-1894), Ernest Haeckel (1834-1919) and Friedrich Nietzsche (1844-1900), amongst others (Sporre, 1990:381).

The accentuation of scientific empirical knowledge would result in the development of positivism, which, up until the mid-twentieth century, was the undisputed research

paradigm. According to Schön (1983:31; 1987:3), the dominant view of knowledge at universities was, and for the most part still is, embedded in positivist and post-positivist paradigms. The notion of positivism was described by Comte in the nineteenth century and has its roots in the scientism and rationalism, which emerged from the seventeenth century onwards.

Positivism holds that the only form of knowledge is facts derived from descriptions of sensory phenomena. It relies on empiricism as an inductive method of scientific research (which entails an observation process) and concludes that only that which can objectively be counted, measured or verified is true (cf. Blackburn, 2005:284). Generalisations were drawn and applied to all fields from these "true" solutions and answers, based on observations. According to Horkheimer (1972), the divisions between different sciences and fields were thus negated, ignored, and finally removed. He stated that:

The division of sciences is being broken down by deriving the principles for special areas from the same basic premises. The same conceptual apparatus, which was elaborated for the analysis on inanimate nature, is serving to classify animate nature as well (Horkheimer, 1972:189).

In this context, theory originates from the perspective that the relation between an individual phenomenon and the general concept is always constant and that personal experience and the individual characteristics of a phenomenon are non-essential. The more phenomena that may be subsumed under a general concept (or theory), the more valid the concept or theory is, and the more predictable is its value. In other words, the key aspect of traditional theory is that the formulation of specific concepts based upon observations in the natural sciences is generalised and imposed on all fields and enquiries. Any enquiry, phenomena, or matter is explained and subsumed into a general concept or may be grouped with similar matters (Snyman, 1997:215-216; Adorno, 1975:18; Horkheimer, 1972:199).

As such, this paradigm adheres to the line of reasoning that the application of specialist scientific theory, by means of rigorous, repeatable, objective methods, is the means by which knowledge is gained. In this sense, knowledge is only acceptable if it has been

subjected to rigorous criticism and rational analysis and has been verified by empirical evidence.

The influence of the positivism of the nineteenth century was, surprisingly, also evident in the field of the visual arts as seen in the contributions of Gottfried Semper (1803-1879) who, in his *Architektur und Wissenschaft (Architecture and Science: 1830-1833)* published in (1834), reduced developments in art to an evolutionist development of materials and techniques (Swanepoel, 2004:67-68). Similarly, in the early twentieth century, the influence of positivism was also felt in art analysis, giving rise to a preference for classification and "neutral" descriptions of art. An example of this may be found in *Kunstgeschichtliche Grundbegriffe: das Problem der Stilentwicklung (1950) (Principles of Art History: the Problem of the Development of Style in Later Art)*, a well-known representative text of the work of Heinrich Wölfflin (1864-1945). This means that art and views on art were reduced to formalistic style analysis and deprived of any creativity, or notion of experience (Swanepoel, 2004:68).

Industrialisation and the development of technological programmes fuelled the pre-eminence of scientific knowledge and, by the late nineteenth and early twentieth centuries, positivism was at its peak and entrenched at Western universities (Schön, 1983:32). However, after the First World War (1914-1918) and especially after the Second World War (1939-1945), the utopian vision that modern science had promised had not been realised and started to attract widespread criticism. Amidst World Wars I and II, and the resulting political upheaval and environmental disasters, the unquestioned role of scientific knowledge, as the liberator of humanity, had started to slip from its position of prominence. In fact, some of the results of scientific endeavour, such as the atomic bomb, served as the catalyst for the realisation that science and technology could also be dangerous to humanity (Snyman, 1985:2-6). Sporre states for instance that,

Among the awesome contradictions of an age that has witnessed the worst and the best that humanity is capable of, our vision of ourselves and where we are going is as troublesome for us as it was for our Palaeolithic ancestors. Under threat of being drowned out by the clamour of our machines, poisoned by our own

waste, swamped by the inane, and extinguished by the wind of nuclear holocaust, we struggle to understand what it means to be human (Sporre, 1990:432).

As mentioned earlier, the scientific school of thought was paralleled by, and in dialectic interaction with, a more humanist and Romantic tradition; the origins of which can be traced back to the classical Greco-Roman and Renaissance cultures and the self-realisation of the Reformation. Romanticism embraced subjectivity, self-expression, experience and imagination, which, were for the most part, suppressed by the scientific worldview. The Romantics viewed the world as a unitary organism rather than an atomic machine. The world was not merely an object of study that could be explained in mechanistic terms. Rather, they viewed nature as a mystery to be experienced and revealed by artistic and imaginative expressions. Therefore, the Romantic period found its most compelling expression to be experienced and accessed through artistic and imaginative expression in literature, art and music between 1770 and 1850. Some of the proponents of Romanticism were, among others, Johann Wolfgang von Goethe (1749-1832), Immanuel Kant (1724-1804), George Wilhelm Friedrich Hegel (1770-1831), Johann Christoph Friedrich von Schiller (1759-1805), William Blake (1757-1827) and William Wordsworth (1770-1850) (Marien & Fleming, 2005:481-483; Blackburn, 2005:321). Of significance to this study is that this second stream of thought allowed for an alternative, subjective, epistemology in which human activities are central to the conceptualisation of knowledge. In this context, emotion, intuition and imagination are explored in order to understand the human condition. By far the most emotional and passionate reaction to the Enlightenment took place in Germany with the *Sturm und Drang* movement, with Goethe as its central figure (cf. Marien & Fleming, 2005:450).

Goethe maintained that the essence of nature could be discovered through the intimate interaction between observation and imaginative intuition. Nature is viewed as dialectically integrated into one unitary whole (cf. Blackburn, 2005:154). The world and human consciousness is an evolving phenomenon, a dialectic process of completing and revealing itself, and thus knowledge is complex and multifaceted. Truth, and by implication knowledge, is subjective, complex and could be informed by multiple realities and perspectives. Tarnas states that:

Thus the Romantic sensibility advanced new standards and values for human knowledge. Through the self-creating power of imagination and will, the human being could body forth unborn realities, penetrate invisible but altogether real levels of being, comprehend nature and history and the cosmos's unfolding—indeed, participate in the very process of creation. A new epistemology was claimed both possible and necessary (Tarnas, 1991:370).

In similar vein, Kant, who is thought of as a methodological philosopher still influenced by rationalism, offered a way of understanding these romantic sensibilities. With regard to judging aesthetics, he conceptualised the notions of the quality, quantity, relation and modality of works of art, in the judgment of beauty and the sublime. In his *Kritik der Urteilskraft (Critique of Judgment)* (1790), he propagated the notion of the artist as Genius. In this context, emphasis was placed on the multimodal nature of creativity, originality and the technical and artistic qualities of the artist (Kant, 2002:61-63). Therefore, a work of art is the product of the genius of the artist. Wartenberg (2002:50) stated, "The genius simply has a natural ability to create objects that produce aesthetic pleasure in us" (cf. Marien & Fleming, 2005:482). Kant, in line with David Hume (1711-1776), investigated the role of taste and the subjective judgement of artworks. As such, Kant suggested that art and thinking about art is a way of realising new visions that promote an understanding of the human condition. Accordingly, the purpose of art transcends the mimetic to evoke patterns of subjective (yet universal) patterns of meaning inherent to experiential interactions with the world. Blackburn (2005:198) views Kant's contribution to philosophy as follows:

... his place as the greatest philosopher of the last three hundred years is well assured. He made the first decisive break with the sensationalist empiricism that prevailed in the 18th century, but without retreating to an indefensible rationalism (Blackburn, 2005:198).

In relation to Kant, Hegel, with his metaphysic-idealistic views on art, suggests that the work of art is a revelation or manifestation of *das Geistliche (the spiritual)*. He further states that:

Now the nature of the artistic ideal is to be sought in this reconveyance of external existence into the spiritual realm, so that the external appearance, by being adequate to the spirit, is the revelation thereof. Yet this is a reconveyance into the

inner realm, which at the same time does not proceed to the universal in its abstract form,... but remains in the centre where the purely external and the purely internal coincide (Hegel, 2002:77).

Although the Romantic Movement waned after 1850, its importance lies in its establishment of a more humanist, self-determinate and dialectic interaction with both the arts and society. As such, Romanticism and humanism would influence and result in a variety of critics of established societal norms, which would result in a change in society and the conceptualisation of art. Romanticism is a blanket term covering an entire spectrum of social trends, individual attitudes, and artistic responses (Marien & Fleming, 2005:511). Essentially, human experience and the interaction with each other and the world would lead to a range of dialectic theories. These theories, such as Marxism, neo-Marxism, post-structuralism, post-colonialism and feminism, to name a few, are generally categorised under the banner of critical theory (Borgdorff, 2011:48). What is important in the context of this study is that this second stream of thought resulted in research paradigms (addressed in Chapter four) that were experiential in nature and concerned with exploring the human condition.

An example of the dialectic interaction between the scientific worldview and the humanistic worldview is the critique of capitalism from a Marxist perspective. Capitalism, which had developed out of the scientific and industrial revolutions, had increasingly dehumanised labourers by treating them as a mechanistic part of the production process. The capitalists (business owners) thus exploited the workers in the pursuit of capital gain. Karl Marx (1818-1883) and Friedrich Engels (1829-1895) laid the foundation for Marxism with *The Communist Manifesto* (1848) and *das Kapital* (1867-1894) as well as with Marx's theories about society, economics and politics. Marx is of the opinion that human societies progress through the process of class struggle. This is essentially a conflict between workers (the dispossessed and alienated working class) and the owners or employers that controlled production. He called capitalism the dictatorship of the bourgeoisie, believing it to be run by the wealthy classes for their own benefit; predicting that capitalism would produce internal tensions, which would lead to its self-destruction and replacement by a new system. He further argued that class antagonisms between the bourgeoisie and proletariat, under capitalist rule, would

eventuate in the working class' conquest of political power as a dictatorship of the proletariat and eventually establish a classless society (Chambers *et al.*, 1987:731). In this regard, Marx urged, "Workers of the world, unite. You have nothing to lose but your chains" (cf. Marien & Fleming, 2005:459). This position, also known as socialism, essentially speaks of a society governed by a free association of producers. Therefore, the foundation of life is materialistic and the basic function of each civilisation is the production of material life. For Marx, the human being is *homo faber*: a working / producing being. Therefore, one could state that contrary to other philosophies, Marxism was not interested in understanding and interpreting the world and reality, but in changing it, by way of revolution. Artists played an important role in Marxism, to contribute to a historical awareness, or lack of it, as according to this view, art must have a socio-economical and political relevance (Sporre, 1990:380; Van Niekerk, 1994:218). In Marxist theory, the role of aesthetics was in assisting to change the social *status quo* by focusing on the labour of the working class, as can be seen in the work of social realists and communist artists.

The neo-Marxist theorists were also critical of the positivist approach and argued that positivism left no room for speculation or any subjective and personal experiences. It was particularly the reaction against this "narrowed" concept of experience present in empiricism that gave impetus to critical theory developed by neo-Marxist theorists. Snyman (1997:214) stated that the neo-Marxists have certain problems with traditional theory (referring to positivist or scientism) and purely observational research frameworks: positivist social sciences operate with a narrowed or impoverished context in which their concept of experience is inadequate and their view of scientific objectivity is untenable.

In reacting against positivist views on art (specifically in reaction against Semper's views), Alois Riegl (1858-1905) who was influenced by Romanticism, stated, that the most important impetus for making art is the artist's *Kunstwollen* (*creative urge/creativity*). The Italian art theorist Benedetto Croce (1866-1952) also reacted against positivism, and wrote about the artist's lyrical intuition or intuitive knowledge. He

was also very strongly pro- *l'art pour l'art*, and emphasised the artwork as an expression of the artist's views and experience. Therefore, he stated that it is impossible to judge art in terms of practical (pragmatic/utilitarian), economic, moral or scientific-logical (positivistic) terms (Kleinbauer, 1989:3, 20, 68-70).

As stated earlier, there were further developments in critical theory, such as semiotics, post-structuralism, post-colonialism, feminism within a postmodernist context, and even meta-modernism. These developments may generally be regarded as pitted against a naïve and earnest confidence in progress and truth, and against confidence in objective or scientific truth (cf. Blackburn, 2005:285). Blackburn describes postmodern views as follows:

Objectivity is revealed as a disguise for power or authority in the academy, and often as the last fortress of white male privilege. Logical or rational thought is revealed as the imposition of suspect dichotomies on the flux of events. Postmodernists differ over the consequences of such discoveries, sharing the sceptic's old problem of how to think and act in the light of the doctrine (Blackburn, 2005:285).

According to Vermeulen and Van den Akker (2010:1) the postmodern paradigm has come to an end when looking at recent developments in art, film, and architecture. They argue for a new fluctuating era "between a modern enthusiasm and a postmodern irony, called meta-modernism". They argue that meta-modernism is informed and expressed by a neo-romantic turn, associated with recent movements in the arts. Therefore, by the end of the twentieth century, greed and technology had led to the pollution of the Earth's atmosphere and depletion of natural resources with, globally, an ever-widening breach between rich and poor. Civil war and political terrorism are the order of the day. In this regard humans look to art as evidence of humanity's creative power in the face of chaos (Marien & Fleming, 2005:654).

However, important in the context of this study is that these emergent perspectives remain dependent on the fundamental conviction that the human mind was not dualistic but rather participatory. In light of the above, it may be stated that the notion of PLR, tacit knowledge and the TOKC stem from this more humanist second stream of thought.

As such, knowledge is not an objective construct, but is viewed in subjective terms, which foregrounds the importance of tacit knowledge.

3.3 The tacit dimension: Michael Polanyi (1891-1976)

One of the differentiating features of Polanyi's work is his determination to overcome conventional dichotomies such as theory versus practice, science versus the humanities, objective versus subjective (Tsoukas, 2002:3-4). According to Polanyi (1966a:1), the reason for this is that the concept of depersonalised, so-called objective knowledge, stemming from the positivist perspective, is problematic within the broader context of the arts and humanities (cf. Biggs, 2002a; Niedderer, 2008.). All knowing involves some dimension of skilful action during which we exercise personal judgement in the performances of that action (cf. Polanyi, 1962:21; Tsoukas, 2002:4). Polanyi's (1966b:4) fundamental insight in this regard is that "we know more than we can tell". In other words, there is a dimension of knowledge that is different from explicit knowledge in that it eludes clear unambiguous communication. This subjective knowledge is often derived from personal experience, feeling, skill and bodily knowledge and is referred to as tacit knowledge.

The theory of tacit knowledge established a continuous transition from the natural sciences to the study of the humanities. It bridges the gap between the I-it and the I-thou, by rooting them both in the subject's I-me awareness of his own body, which represents the highest degree of indwelling (Polanyi, 1962:10).

Polanyi (1962:5; 1966b:4-5) uses the example of how one is able to identify a familiar face among thousands of others but cannot usually describe how this is done. We can, however, reconstruct this face by means of identikits and communicate this knowledge to others. In this sense, Polanyi builds on theories regarding *Gestalt*, being able to integrate parts and identify the whole by means of the "spontaneous equilibrium" without necessarily being able to describe the parts. *Gestalt* is the German word for form or shape. In English it refers to a concept of "wholeness." The concept of *gestalt* was introduced by German philosopher, Christian von Ehrenfels (1859-1932) in 1922. *Gestalt* is a theory of perception that refuted the classical "atomistic" model advocated by empiricists such as Mills and Helmholtz. *Gestalt* is an experience over and above the

mere experience of independent sensations (Blackburn, 2005:151). It explains the phenomena of being able to complete a visual image or see alternative possibilities, even when all the information is not present. The now famous “duck-rabbit” experiment is an example of this phenomenon. In an alternative recasting of the notion of *gestalt*, which focuses on experience, Polanyi states:

I am looking at Gestalt, on the contrary, as the outcome of an active shaping of experience performed in the pursuit of knowledge. This shaping or integrating I hold to be the great and indispensable tacit power by which all knowledge is discovered and, once discovered, is held to be true. The structure of Gestalt is then recast into a logic of tacit thought, and this changes the range and perspective of the whole subject (Polanyi, 1966b: 6).

Consequently, *gestalt* is regarded as the connection between the higher creative powers and operational perception prominent in bodily processes (Polanyi, 1966b:7-9; 1966:5-6). Polanyi explains the acquisition of tacit knowledge by means of an experiment conducted by Lazarus and McCleary in 1949. During this experiment, the participant was shown a large number of nonsense syllables. When shown certain syllables, an electric shock was administered. The result was that the person anticipated the shock when shown certain syllables without being able to identify them. In other words, the participant was unable to identify the syllables but still relied on his awareness of them to anticipate the electric shock. The question as to why this association between the first term (the shock) and the second term (specific syllables) remains tacit, is explained as follows:

Here we have the basic definition of the logical relation between the first and the second term of tacit knowledge. It combines two kinds of knowing. We know the electric shock, forming the second term by attending to it, hence the subject is specifiably known. But we know the shock-producing particulars only by relying on our own awareness of them for attending to something else, namely the electric shock, and hence our knowledge of them remains tacit. This is how we come to know these particulars without being able to identify them. Such is the functional relation between the two terms of tacit knowing: We know the first term only by relying on our awareness of it for attending to the second (Polanyi, 1966b:9-10).

The specific structural aspects of tacit knowledge and the way in which these aspects interact is the topic of the next section.

3.3.1 Structural aspects of tacit knowledge: Focal, Proximal and Semantic dimensions

Tacit knowledge relies on the logic of disjunction in the dependence on that which we cannot tell and are often unaware of, when we attend to something else (Polanyi, 1962:2). The first term is known as the focal term, while the second is referred to as the proximal term. (Gourlay, 2002:8; Polanyi, 1966a:3). With regard to the example of the recognition of familiar faces noted earlier, we rely on human physiognomy (proximal term) to recognise the specific face (focal term). In other words, the fact that we can recognise a particular person when we see them (focal), is reliant on our knowledge of human physiognomy (proximal knowledge).

The functional structure of tacit knowledge requires that we tap into or attend to an embodied source of knowledge (proximal) during the execution of certain tasks (focal). This source of knowledge could be a bodily skill or more theoretical in nature, or a combination of the two. In terms of the phenomenal aspect of tacit knowledge, we attend from the proximal to the focal term of tacit knowledge. In this situation, the appearance of the focal term makes us aware of the proximal (Polanyi, 1966b:9-11).

The interrelationship between the functional and phenomenal structures of tacit knowledge brings us to the third term, which is the semantic aspect of tacit knowledge. In terms of the shock experiment discussed earlier, the syllables signify an approaching shock. As stated, the participant could not identify the syllables but attended to them in terms of the signified meaning. Hence the semantic aspect refers to the recalling of the proximal to contextualise the focal according to the signified meaning (Polanyi, 1966b:12; cf. Stenmark, 2000:4). Thus, tacit knowledge is considered a triangle consisting of the body of proximal knowledge, focal target and the knower who links the two. No knowledge is possible without the linking of the proximal particulars to the focal target by a person. This is what Polanyi means when he says that all knowledge is action and personal (Tsoukas, 2002:6).

Proximal knowledge is often a body of skill sets and theory that have been internalised in order to allow for focal action. As such, proximal knowledge is important and useful when it becomes second nature. An example of this could be a person learning to drive a car. The initial, basic, individual operations such as changing gears and pressing the accelerator are the focus. One cannot drive to a specific destination without first mastering the act of driving. In this context, the car is considered a tool that can only be used effectively if it is not the object of focal awareness (Polanyi, 1962:7). Thus, if one has not fully grasped or internalised the proximal aspects of a process, this could inhibit the focal execution thereof. In this process, we attend from proximal (driving process and road rules) to the focal (the specific destination). The proximal is thus a combination of theory, practice and experience in this case. The acquisition of skills and theory that is internalised enhances the practitioner's repertoire and initiates a higher level of more skilful action. It should be noted, however, that although Polanyi seems to emphasise the bodily experience, tacit knowledge is seen as a combination of practice and theory (Polanyi, 1962:6).

This higher level functioning informed by the acquisition of experience, skill and the development of talent is what Schön (1987:22) refers to as artistry. Artistry comes from synthesising advanced practical skill and theory in the execution of a task. This is often dependent on the depth of one's repertoire and results in skilful performance and judgment. Tacit knowing is regarded as the understanding of a comprehensive entity by knowing the proximal and focal. Thus, a significant relationship between the two parts is established to determine what tacit knowledge actually knows. Polanyi (1966b:13) refers to this as the fourth, ontological aspect of tacit knowledge.

Therefore, the notion of tacit knowledge is founded on the fundamental assumption that all knowledge is based on experience, in contrast to a measurable, objective truth as advocated by the positivist and post-positivist paradigms. However, this does not mean that tacit knowledge cannot contribute to explicit knowledge and, in this sense, I concur with the following statement:

Let us recognise that tacit knowing is the fundamental power of the mind, which creates explicit knowing, lends meaning to it and controls its uses. Formalisation of tacit knowing immensely expands the powers of the mind, by creating a machinery of precise thought, but it also opens up paths to intuition. Any attempt to gain complete control of thought by explicit rules is self-contradictory, systematically misleading and culturally destructive. The pursuit of formalisation will find its true place in a tacit framework (Polanyi, 1966a:18).

In line with Polanyi, Davenport and Prusak (2000:5), cited in Brătianu and Orzea (2009:113), consider knowledge to be a fluid mix of diverse contextualised experiences, values and information that forms the basis for insight and evaluation.

The interrelatedness of the focal and proximal and the associated notion of repertoire, which assists in skilful exploration, is what makes the conceptualisation of tacit knowledge relevant to the PLR context. In PLR, the process and final creative product are viewed as central to the investigation. By nature, the creative process is not a predetermined linear process (cf. Mäkelä & Routarinne, 2006; Gray & Malins, 2004). As such, the focal activates the proximal, which is reliant on the artist's skill and knowledge repertoire or artistry. This process progresses from the known (focal), which activates and facilitates further exploration (proximal). As elucidated in Chapter five, Sullivan (2011:100) describes PLR as a move from the "known to the unknown". In this context, PLR is an exploratory journey during which the artistic production and related creative process are contextualised. This process of contextualisation utilises both the tacit and explicit knowledge modalities. It is the artefact and the contextualisation thereof that make a collective contribution to knowledge (cf. Sullivan, 2011:99; Farber, 2010:2; Borgdorff, 2011:45-47).

In terms of the TBP project, the theme (artist's books) is viewed as the focal dimension, and the resulting creative process and artistic production then draw on the artist's proximal stock of knowledge. As has been discussed in Chapter two, the above-mentioned project conducted at the NWU on its Potchefstroom Campus was designed to move from creative production (tacit) to textual research outputs (explicit). The notion of placing the acquisition of knowledge in a tacit framework is fundamental to the selection of an appropriate research paradigm and management approach for PLR

projects. As such, it is contended that the participatory paradigm and the TOKC are appropriate in this regard.

In summary, the functional aspects of tacit knowledge rely on the appearance of the focal to recall a proximal stock of knowledge. The proximal stock of knowledge is a combination of past experiences, theoretical knowledge and practical skills which may only be utilised effectively if it has been internalised. Knowledge that has not been internalised remains the central focus and limits the scope of exploration. In terms of knowledge acquisition, the utilisation of the proximal and focal is not passive or incidental. The individual's ability to utilise proximal knowledge, to find meaning and contextualise focal phenomena, is key to denoting the semantic aspect of tacit knowing.

The distinction between the structural and operational aspects of tacit knowledge is somewhat artificial as the two are interrelated and interlinked. However, for the purpose of clarity, the notion of indwelling discussed below is considered an operational dimension.

3.3.2 Operational aspects of tacit knowledge: Indwelling and knowledge communication

For the most part, the proximal dimension of bodily tacit knowing may be perceived as dwelling in the body or an extension of our body. Polanyi (1966b:17; 1966a:14; 1962:9) elaborates on this concept and introduces the notion of "indwelling" by means of interiorising knowledge. In the process of indwelling, the inextricable relationship between focal and proximal is no longer observed, but dwelled in, to produce meaning. Accordingly, the mind-body separation is challenged; hence the perception and understanding of bodily skills and functions are an important part of tacit knowing (Polanyi, 1966b:15).

Polanyi (1966b:16-17; 1966a:11; 1962:9-10) contends that indwelling is the process of becoming immersed with the subject through the experience of entering the mind of the person, their environment and situation. In other words, it is the comprehensive cognisance of the human mind and body (Polanyi, 1966a:14). Indwelling disregards the traditional dichotomies of mind and body, or subject and object. Therefore, in this

process, objective scientific knowledge is not the ultimate source of knowledge. While indwelling is regarded as a way to access knowledge, proximal awareness may range from a level of consciousness to a level that is inaccessible and unconscious (Polanyi, 1962:4).

Polanyi (1966b:30) distinguishes between personal and exploratory indwelling. Personal indwelling is that which occurs from inside the body; this occurs when a performer coordinates actions and thinking by immersing himself and dwelling in performance. Exploratory indwelling, on the other hand, occurs from outside the body, when one dwells in the actions of others.

The interpretive purpose of indwelling is to try and understand the act of tacit knowing and not to try to formalise it, or reduce it to purely explicit forms (such as text) of knowledge. It is not possible to understand tacit knowledge in purely explicit forms, as explained by Polanyi:

If such formalization of tacit knowing were possible, it would convert all arts into mathematically prescribed operations, and thus destroy them as works of art. The analysis of art can be profoundly revealing, but only if it remains incomplete. It must limit itself to the discovery of maxims, the application of which is itself a work of art. However greatly it may profit from incorporating a skeleton of such maxims, the originally tacit act will still remain tacit, for it will rely on a subsidiary awareness of its maxims and keep their application under tacit control (Polanyi, 1962:13-14).

It may be concluded that explicit forms of knowledge will fail to provide a holistic picture of the tacit dimension. It is for this reason that multimodal communication methods, which include those related to specific disciplines, such as drawing, model making and identikits, need to be used in combination with explicit communication forms. What makes tacit knowledge important in the context of this study is that the ambiguity of such knowledge can often only be effectively communicated by a combination of communication methods. Skills, such as drawing, model making and three-dimensional computer visualisation, could be used as knowledge communication and transfer

mechanisms. In terms of PLR, these multimodal communication methods are essential, as it is impossible to give a holistic account of an artefact in purely explicit forms.

These different skills are frequently indicative of different parts of the knowledge creation process. For example, preliminary sketches or mind maps might be used at the start of the creative process with the intent of finding a starting point by surrounding the issue at hand and separating it from other issues. The purpose of which is to look for traces, rediscovering and reconstructing fragments of that which has been neglected or unnoticed. While activities that are more explicit, such as a written exegesis on the findings, may be more appropriate to conclude the process.

3.4 Concluding remarks on Polanyi's views

The significance to this study of Polanyi's conceptualisation of tacit knowledge is that it provides an alternative to the objective, explicitly communicated knowledge modalities often prioritised in the academic environment. In this context, tacit knowledge is considered the natural counterpart to theory in that it is comprised of experience, belief, values, attitudes and ideals. Therefore, Polanyi's alternative view of knowledge provides an important anchor point for the conceptualisation of PLR in that it emphasises the tacit origins of knowledge and values the contextualisation of personal experiences.

Additionally, the concept of tacit knowledge presents a structural understanding of the knowledge creation process in which experiential and practical knowing are fundamental and instrumental in the creation of explicit knowledge. Furthermore, the notion that bodily experience, skills and theory are progressively integrated and internalised or dwelled in, results in a richer source of proximal knowledge. This is important when considering research in the creative disciplines, as an advanced level of artistry is able to be equated to advanced intellectual endeavours.

However, although Polanyi touches on the existence of a process of conversion from tacit knowledge to explicit knowledge, he does not elaborate on the manner in which this

might occur. In this regard, Donald Schön's notion of reflective practice (which builds on Polanyi's work) is fundamental to research in the creative disciplines.

3.5 The reflective practitioner: Donald Schön (1930-1997)

In this section, I firstly discuss the concepts of reflective practice as well as the associated concepts of knowing-in-action, reflection-in-action and reflection-on-action and relate them to the notion of tacit knowledge. Thereafter, the functioning of reflective practice within the creative and management disciplines is clarified.

As stated earlier, the work of Donald Schön (1983; 1987) has had a significant impact on both PLR and the TOKC in that it foregrounds an epistemology of practice which is based on Polanyi's (1966b:4-15) conceptualisation of tacit knowledge. It is specifically Schön's (1983) critique of technical rationality (post-positivism) and the proposition of reflective practice as a research method that is important in this context.

Schön discusses reflective practice in a variety of professional settings. However, the two that are deemed relevant to this study are (i) the design professions (Schön, 1983:76-104) and the (ii) field of business management (Schön, 1983:241-266). In the discussion of these professional disciplines, Schön foregrounds the importance and usefulness of the tacit dimension and reflective practice. The reason for selecting these two disciplines is that this research is concerned with the management of multi-practitioner arts-related PLR projects, which involve the creative disciplines such as design, visual arts and creative writing. Additionally, the business management aspect will inform the management of these PLR projects in an artistic context.

Schön (1983:78) discusses design professions through the presentation of a case study in which a master designer guides a student through the design process in an architect's design studio. For the purpose of this study, it is not necessary to discuss the whole case study. Therefore, emphasis is solely placed on the characteristic features of the design process. These characteristics are regarded as generic processes shared by the majority of design professions. Creative practice, in this context, is considered a "conversation with the materials of a situation" (Schön, 1983:78). As the designer / artist

is typically involved in the making of an artefact of sorts, they work in a particular context and situation and with specific chosen materials. In this sense, similar to the creation of the identikit, the artefact may be viewed as an alternate means of communication (Polanyi, 1962:5; 1966b:4-5). This dimension is also one that causes the reflection in and on this mode of communication to be applicable to the creative disciplines. Schön describes the design process as follows:

In contrast to analysts or critics, designers put things together and bring new things into being, dealing in the process with many variables and constraints, some initially known and some discovered through designing. Almost always, designers' moves have consequences other than those intended for them. Designers juggle variables, reconcile conflicting values, and manoeuvre around constraints – a process in which, although some design production may be superior to others, there are no unique right answers (Schön, 1987:42).

This relates to the exploratory journey undertaken during PLR. However, understanding and recording this process is facilitated by reflective practice: the topic of the next section.

3.5.1 Knowledge-in-action, reflection-in-action and reflection-on-action

Reflective practice, as conceptualised by Schön (1983), is considered a development and communication strategy that conveys Polanyi's notion of indwelling. Knowledge-in-action, or knowing-in-action, refers to the type of knowledge we employ during routine, everyday tasks. Knowing-in-action can be skilful practice, which is often spontaneous and does not stem from premeditated intellectual thought. This is often practice that has been learned through experience and internalised in that we "know more than we can tell" when performing certain activities. This knowing comprises the internalisation of both theory and practice. Knowing-in-action thus refers to the application of intelligent practice to particular situations. This means that an inherent body of knowledge becomes internalised to such an extent that one need not actively think about it when performing certain everyday tasks. Very often, the only way to adequately reveal this knowledge is through a practical execution of tasks (Schön, 1983:54; 1987:25-26).

Reflection-in-action is a more meditated process of consciously reflecting on knowing-in-action. Schön (1983:56) gives the example of jazz musicians who are in a constant state

of improvisation and adaptation during a performance. In this case, they do not necessarily reflect-in-action by means of words but rather through feelings and reactions to the music. Reflection-in-action can be quick and almost immediate, as in the case of jazz, or it may be a more prolonged meditative process, depending on the particular task.

Unlike knowing-in-action, reflection-in-action is an analytical process of framing problems and reacting to the situation. The reaction is, however, not determined by a specific pre-established theoretical dictum but is, rather, a process of exploration informed by both tacit and explicit knowledge (Schön, 1983:54; 1987:28). This relates to PLR in that text and the artefact are considered to have two different communication registers. As a result it is only through the combination of making and writing, that a holistic picture of knowledge can be communicated (Biggs, 2002a:4; Niedderer *et al.*, 2006:5; Mäkelä & Routarinne, 2006:24).

Reflection-on-action is normally conducted as a type of post-mortem on knowing-in-action and reflection-in-action. In other words, the practitioner engages in a post project evaluation of her/his actions and the actions of other participants; however, it is possible to reflect-on-action during a project. Reflection-on-action is often used to prepare for similar projects and situations in order to obtain a more satisfactory result (Schön, 1983:61). As discussed in Chapter two, in the context of this study, the experience gained during the TCC project that facilitated the TBP project could be viewed as a process of post-mortem reflection-on-action (Combrink & Marley, 2009:177-205; Greyling & Marley, 2009:1-30; Marley & Greyling, 2010:168-182).

Whether reflecting-on-action or reflecting-in-action, various avenues of reflection, investigation, exploration and experimentation exist. According to Schön (1983:62) the practitioner may reflect on the strategies and theories that underlie patterns of behaviour or on feelings and emotions that resulted in a particular course of action. Additionally, reflection may involve reflecting on the solutions and the efficacy thereof within a larger institutional context.

This process is considered a reflective conversation with a particular situation or problem. In this process, the feedback from the situation is regarded as necessary information determining the next form of action. The *modus operandi* for such a conversation needs to be either reflection-in-action or reflection-on-action or a combination of the two.

The reflective conversation is often triggered when a standard operational theory and or practice no longer works satisfactorily or no longer fits a specific situation. The problem is not initially obvious and may seem unclear, complicated and confusing, thus, forcing the practitioner to abandon the routine solution and draw on a more diverse way of thinking (Schön, 1987:33-34). Alternatively, in Polanyi's terms, the occurrence of unfamiliar focal phenomena forces the practitioner to draw on an alternative body of proximal knowledge to solve the problem or answer the question. As Schön states, in such an unexpected situation:

...the practitioner experiences a surprise that leads her to rethink her knowing in action in ways that go beyond available rules, facts, theories, and operations. She responds to the unexpected or anomalous by restructuring some of her strategies of action, theory of phenomena, or ways of framing the problem: and invents on-the-spot experimentation to put her new understanding to the test. She behaves more like a researcher trying to model an expert system than like the "expert" whose behaviour is the model (Schön, 1987:35-36).

The notion of reflective practice is indicative of a holistic conceptualisation of knowledge and is built on the assumption that there is a tacit dimension, as discussed by Polanyi. In this context, reflection-in-action and reflection-on-action relate to the structural dimension of tacit knowledge and provide terminology to utilise this knowledge more specifically.

As is apparent from the discussion in Chapter two, reflective practice is evident in the execution of multi-practitioner arts-related PLR projects at the NWU. In the next section, the notion of reflective practice and rigour is discussed. This is important to the establishment of a methodological foundation for PLR, addressed in Chapter five.

3.5.2 Reflective practice and rigour

According to Schön (1983:144), practitioners engage in experiments with various levels of rigour. However, the experiments he refers to are different from the type of rigorous, objective, hypothesis-testing, controlled experiments normally conducted with the purpose of verifying scientific theory. In this context, practitioners violate the canon of the controlled experiments by not maintaining an objective distance, as prescribed by positivism, but, rather, become actively involved in understanding and shaping the situation (Schön, 1983:149-150). Therefore, they are not trying to refute or confirm a predetermined hypothesis, but rather trying to bring about a situation of change by reflecting-in-action and reacting to a particular situation.

In this process, the emphasis is on transforming a particular situation into a desired one. This is understood as a transactional conversation between the practitioner and the situation or phenomenon. It should also be noted that this experimentation is not, or should not, be a self-fulfilling prophecy. Instead, the practitioner must use intuition and experience by paying attention and reacting to the issues that emanate from situations or the object of study. The notion of artistry is important in this context. As stated earlier, artistry refers to a high level of functioning, which comes from the synthesis of advanced practical skill and theory in the execution of a task. In this context, the accumulation of experience and repertoire results in skilful performance and judgment. The utilisation of insight, intuition and the artistic repertoire facilitated by reflective practice, are fundamental to PLR (cf. Borgdorff, 2011:55; Sullivan, 2006:23).

This stance towards enquiry and research is thus fundamentally different from the positivist epistemology. The notion of reflective practice does not require or even promote objective distance from the issue being investigated. The practitioner is regarded as an active agent in changing and shaping the situation. However, they must be open to "talk back" from the situation, in other words, maintaining a type of "double vision" which allows for new research possibilities to arise (Schön, 1983:79). Consequently, there is not a predetermined hypothesis to be verified or refuted through

the application of a scientific theory that utilises instrumentally controlled experiments. Being open to feedback from the creative process and to the fact that research does not necessarily have to be hypothesis driven is also a tenet from reflective practice that PLR has adopted (cf. Borgdorff, 2011:56/57). As discussed in Chapter two, the multi-practitioner arts-related PLR project conducted at NWU was designed to accommodate an "open" approach that recognises the creative process and final creative outputs as research (Marley & Greyling, 2010:164). As such, the establishment of partnerships; freedom and voluntariness in terms of participation; creativity, originality and ingenuity; and an approach of discovery, play and fun were encouraged.

In this context, the experiments conducted are open-ended and free flowing. According to Schön (1983:145-146), three types of experiments are utilised by practitioners: exploratory, move testing and hypothesis testing experiments.

Exploratory experiments may be described as "testing the water" and are conducted without a predetermined, expected result. In other words, this is the sort of initial action taken when one first encounters a phenomenon. Move testing experiments investigate whether a particular move yields the expected results. Consequently a move or action is made to affirm or negate the expected results, which subsequently leads to further moves. Hypothesis testing experiments are the most rigorous of the three and include those experiments whereby a particular position and route of exploration are justified. Very often, in the reflection-in-action context, there are a variety of hypotheses or possibilities to be explored from which the most appropriate course of action is to be chosen. This is considered as a situation in which the actions taken are neither to confirm a set of data nor to become a self-fulfilling prophecy (Schön, 1983:150). Embracing the presence of a multitude of interpretive possibilities has also become a characteristic of PLR (Borgdorff, 2011:57; Sullivan, 2006:19; 2011:17; Slager, 2011:335; Chapter five).

In order to proceed towards a more rigorous approach, reflective practitioners go through a process of exploratory experiments, move testing experiments and hypothesis

testing experiments. During this process, the results of move testing and hypothesis testing are either accepted and lead to further action, or are refuted. This process is informed by some theoretical context, and if refuted, will in turn lead to an evaluation of the basic assumptions, theories and results, by means of a series of reflection and further action. It is my conclusion that as one proceeds from exploratory experiments, move testing experiments and hypothesis testing experiments, one is in fact moving from pure practice to practice informed by a theoretical context. In such a case, practice is an activity linked to a wider contextualised body of knowledge. As one goes through this process, the relevance and appropriateness of the conceptual links that instigated any number of these experiments inform one's practice and the investigation becomes refocused. An approach that demonstrates this move from pure practice to contextualised practice is the creative production cycle as conceptualised by Scrivener and Chapman (2004:6) and discussed in Chapter five.

This model accommodates the ever-changing nature of contextualised practice. Not having a fixed, predetermined hypothesis, but rather a shifting one, gives rise to questions, such as when does one stop experimenting? The indicator in this scenario is not the logic of confirming a particular result or set of data, but rather the logic of affirming the particular course of action and the corresponding results (Schön, 1983:155):

The value of controlled, distance, and objectivity, central to the model of Technical Rationality, takes on new meaning in the reflective conversation. Here the inquirer tries, within the limits of his virtual world, to control variables for the sake of hypothesis-testing experiments. But his hypothesis is about the situation's potential for transformation, and in the testing process he steps into the situation. He produces knowledge that is objective, in the sense that he can disconfirm it. He can discover that he has not achieved satisfactory change or that he ought to undertake change of a different order. But his knowledge is personal, bounded by his commitment to appreciative systems and overarching theory. It is compelling only to members of a community of inquiry who share these commitments (Schön, 1983:166).

Reflective practice, with its emphasis on the exploratory process, makes the related ideas, exploratory experiments, move testing experiments and hypothesis testing

experiments appealing to PLR and knowledge management. This approach underpins the tacit origins of knowledge and the utilisation thereof.

3.5.3 Reflective practice and creative disciplines

As mentioned earlier, the design discipline's utilisation of reflective practice discussed by Schön occurs by means of the activities that take place in an architectural studio. In this context, design (and the creative disciplines in general) are viewed as a reflective conversation between the material and the situation that may trigger a multitude of possibilities (Schön, 1983:78).

These possibilities can, however, only be explored if the maker or makers become involved in the reflective conversation, which involves having the necessary set of skills to complete the task. This is regarded as knowing-in-action or what Amabile (1996:83) refers to as domain relevant skills. These are considered to be relative to a specific domain, such as factual knowledge, technical skills and special talents, which can be utilised and or synthesised to solve problems.

Additionally, practitioners must enter into a reflective conversation through reflection-in-action and reflection-on-action, involving being responsive to the feedback from the particular situation; in other words, being able to identify and apply the best solution to a given situation by means of evaluation and responding to the context, material and situation. In this context, those skills which Amabile (1996:88) refers to as creative relevant ones, become important. These include the ability to explore new cognitive pathways and styles. This cognitive style is characterised by those who see things differently, thus breaking perceptual and cognitive sets by abandoning unsuccessful problem solving strategies and moving in new directions. Additionally, understanding and appreciating complexity, using wide rather than narrow categories to define relationships as well as the ability to suspend judgement and keep the response option open for as long as possible, are important.

In the case of the qualified architect and the student, as described by Schön (1983:79-104), drawing is used as part of the reflective conversation. This is indicative of how

practitioners work: they use different forms of communication, particularly those related to their disciplines, such as drawing and model making, in combination with text and language. Sketching and other methods of this nature are useful tools to explore and visualise dimensions such as space, proportion and layout, which are often difficult to describe in words. The reason for this difficulty is that they mainly rely on tacit knowing to explicate and explore the issues at hand. Schön (1983:104,162) refers to the use of such tools as creating virtual worlds, in which practical problems are explored in a virtual setting before the real world implementation takes place. These processes, although difficult to articulate, are a form of problem solving by means of a series of iterations or re-appreciation, re-invention and re-drawing. They also contribute to the artistry and repertoire of the practitioner. In terms of PLR, the use of virtual worlds or communication modalities, related to the particular creative discipline, are inherent to the process. The cycle of iterations or re-appreciation, re-invention and re-drawing described above is the way in which creative practitioners explore and move from the known to the unknown. This reflective process is indicative of the chain of reasoning through multimodal exploration and is central to PLR.

Reflective practice is reliant on the practitioner's repertoire of setting and solving problems. This repertoire is what Schön (1983:138) regards as the practitioners' reflective practice experiences and the level of their discipline, expertise and experience. Such experiences help guide thinking and action when choosing a route or method by which to conduct the exploration. It should be noted that reflection-in-action and reflection-on-action are important to counteract and disrupt outmoded processes that have become routine. This is similar to the notion of *kata*¹⁸, which is a concept associated with the TOKC discussed in Chapter seven. The reflective practitioner views each situation as unique and treats it as such. Practitioners need to be able to utilise their repertoires to address and find solutions to both familiar and unfamiliar situations. As discussed, the experience gained during the TCC project informed the management of the TBP project. The first project informed and developed the management team's

¹⁸ *Kata* is a Japanese word, which means that individuals in the execution of a routine task have the freedom to evaluate, reassess and redesign processes and routines (Nonaka *et al.*, 2008:43).

repertoire. One of the ways in which designers develop and utilise their repertoire is by means of social interaction and teamwork. Such activities are intended to facilitate understanding and problem solving, which brings us to the notion of practicums (Schön, 1987:36-43).

3.5.4 Reflective practice: Practicum

The concept of reflective practicums, introduced by Schön (1987) in *Educating the reflective practitioner*, is essentially an educational setting in which students and staff solve real world problems by means of collaborative practice. Such a setting focuses primarily on the development of reflective practice as an intellectual skill to be used by both parties. The thinking is that practicums are able to contribute to curriculum reform by facilitating the use and development of tacit knowledge. In other words, in combination with reflective practice, practicums offer a way of prioritising tacit knowledge in the educational context. Practice is not merely a means to confirm or refute scientific knowledge, but rather, a knowledge generating methodology and approach. Additionally, practicums are important to this research since they affirm that reflective practice is not only an individual activity. Research in the creative disciplines is often conducted collaboratively - involving several people with differentiated roles and distributed expertise that interact effectively with each other (Smith & Dean, 2009:23; cf. Chapter one). When creative practitioners collaborate, they bring together not only experience and skills, but also the related proximal stock of knowledge. As a result, problems are approached from a variety of perspectives. This may result in innovative and unconventional solutions, as well as skills transfer and knowledge creation (cf. Marley, 2012).

There are various types of practicums, such as apprenticeships and workshops. However, a typical practicum in a formal educational setting is designed to teach practice by means of a situation that emulates the real world. Students typically work on pseudo real world (industry) briefs without the pressure of actually being in the industry. A design studio, where students execute projects for virtual brands and clients, is a typical example of this process. In this situation, students are guided and facilitated by

lecturers to be *au fait* with the conventions, language and appreciative systems of the discipline (Schön, 1987:36-37).

Although conventional teaching methods, such as formal lectures that communicate information and theories, are used, the focus is placed on the transfer of practical skills. The main activities are guiding and facilitating student learning by means of demonstration, questioning, advising and criticising. This implies that both tacit and explicit knowledge are being communicated and demonstrated. There is thus an implied understanding that there is more to be learned than can be told; students are therefore given focal tasks that evoke proximal knowledge. During this process, students build up a repertoire and learn from the artistry of others.

Practicums are group activities and the social and intellectual interaction between students is a vital part of the learning experience (Schön, 1987:38). In this situation, students are initiated into reflection-in-action and reflection-on-action. They thus engage in a reflective conversation and continual dialogue with the problem, situation and materials.

The dominant logic¹⁹ of an institution determines the type of knowledge, information and data deemed relevant. The cognitive schemes developed, experiences and processes inform the justification processes. A shared worldview, or a collective paradigm common to a group of individuals or organisation, is the factor, which shapes actions, perception and argument within an institutional setting (Von Krogh & Grand, 2000: 19).

Knowledge is developed and advanced by an ongoing critical dialogue between established dominant logic and contemporary perspectives. Innovative ideas are evaluated in terms of the established corporate knowledge basis and justification process, which determine whether such knowledge is rejected or considered appropriate and accepted. There is a contradiction within this system: for new knowledge to be accepted and justified, it needs to conform to institutional systems. However, if

¹⁹ Although it is important to introduce the concept of dominant logic here, the relationship between dominant logic, knowledge justification and negotiating institutional research context is explored in detail in chapter five.

knowledge is to be advanced, this new/divergent knowledge is necessary in order to challenge the system from within (Von Krogh & Grand, 2000:17/20). In other words, on the one hand, newly created knowledge has to relate to existing knowledge and procedures in order to be accepted; on the other hand, new knowledge, by its nature, challenges the existing status quo through its novelty, opening up potential fields of exploration. Essentially what Schön is saying, with which I concur, is that practicums and reflective practice are mechanisms through which institutional dominant logic may be challenged. As such, there is a need to balance and find place for both tacit and explicit knowledge in the creative disciplines since they are both necessary to negotiate the validity of PLR in the university context (Sullivan, 2005:26). The significance of challenging the dominant logic of academic institutions, with regard to PLR, is also discussed in Chapter five. However, it is quintessentially the development of a research approach that accommodates both creative practice and the related textual explanation and contextualisation thereof (Borgdorff, 2011; Sullivan, 2006; Mäkelä & Routarinne, 2006; Durling & Niedderer, 2007).

To reflect on the above section, reflective practicums are important for a number of reasons. Firstly, they reaffirm the notion that knowledge consists of interacting and intertwined tacit and explicit modalities. Secondly, they establish that social interaction and continuous dialogue are valuable knowledge-generating activities. Thirdly, practicums or projects of this nature may be used to bridge the gap between practice and theory and thus they affect the institutional-dominant logic. Fourthly, practicums and collaborative practice may be instrumental in challenging the dominant logic in terms of the type of knowledge prioritised by universities (cf. Marley, 2012; Marley & Greyling, 2009). Fifthly, practicums verify that it is not ideal to separate practice from theory, but these dimensions need rather to be managed to the mutual benefit of both. Correspondingly, reflective practicums share the above-mentioned characteristics with co-operative inquiry, to be discussed in Chapter four.

3.6. Reflective practice and the management disciplines

Schön (1983:236-237) conceptualised and described the notion of the reflective practitioner within the human relations mode of thinking. Managers who operate in this mode apply a method of reflection-in-action and reflection-on-action. In reality, they often actively engage in reflective conversations, which have the same characteristics as those discussed as belonging to the design professions.

However, there are some unique aspects of reflective practice that should be considered in the management context. Reflective practice is informed by the repertoire of the individual, but is additionally framed within the broader framework of organisational culture, history, vision, mission and operational techniques. As a result, the organisational culture influences present and future action. In other words, the manager's agency, embedded in the organisational system, is affected by the degree to which an organisational environment is conducive to reflective practice. Reflective practice is thus significantly affected by the degree to which an organisational culture is structured around problem finding and problem solving as well as knowledge sharing and the creation thereof (Schön, 1983:241-265).

Schön's (1983:243) investigations revealed that managers demonstrated characteristics of reflection-in-action and reflection-on-action. However, they seldom communicate their reflection-on-action. Consequently, their knowledge remains private and does not activate effective organisational change. There are various reasons for this, the most significant of which is neglecting to admit mistakes, thereby becoming vulnerable and possibly having one's credibility challenged in a highly competitive business environment. This situation inhibits reflective practice because it is in the articulation and communication of one's own reflection-in-action and reflection-on-action to others that one develops a critical awareness of one's actions. As a result, managers who do not engage in the communication of reflective practice, fail in their duty to educate subordinates and inform superiors. In response to the identification of this problem, the TOKC provides a management approach that facilitates reflection-in-action and reflection-on-action.

Organisational troubles, the interpretation of market phenomena and learning about product development are general activities in managerial practice. In such a context, there are two important activities that promote reflective practice and relate to PLR.

The first of these is the realisation that the end goal is often variable and that, therefore, the process must allow the emergence of new ideas. Hence, during product or procedural development, the possibility of an open and flexible agenda should be allowed. This is a general characteristic of reflective practice, but specifically framed in the organisational context. The following quote illustrates this point:

... they (product development team) must be willing to give up the assumption that they know the target, once and for all, at the beginning of the development process. As they discover new properties in the phenomena and new meanings in the responses of consumer panels, they learn to restructure not only the meaning but the end of developments (Schön, 1983:252).

This notion of an open agenda, which allows for the development of new, unforeseen possibilities, is a feature, which makes reflective practice relevant in the PLR management context. In the reflective practice management approach, the project aims and objectives could be viewed as the focal dimension. However, proximal knowledge is acknowledged and utilised in the exploration and problem resolution process. As is discussed in Chapter two, participants are often selected based on their experience and, by implication, for the utilisation of their proximal knowledge.

Both projects conducted at the NWU were designed to allow for the exploration of creative possibilities and the explication thereof. In terms of these projects, there was an inherent understanding that having a fixed, predetermined vision of the final outcome was impossible. Therefore, the realisation that the final result (target) is variable, makes reflective practice relevant in the management of multi-practitioner PLR arts-related projects at the NWU conducted by History of Art, Graphic Design and Creative Writing on the Potchefstroom Campus.

Second is the notion that it is important to engage in dialogue and keep the discussions moving (Schön, 1983:254). In this sense, it is important for managers to keep the

dialogue alive in order to develop an organisational culture of open problem solving. Conflict is perceived as positive as long as it is on the surface and is managed in such a way as to improve the organisational functioning. The notion of dynamic and continual dialogue is also characteristic and fundamental to PLR and the TOKC.

As is discussed in Chapters six and seven, the development of the TOKC by Nonaka and colleagues (Nonaka, 1994; Nonaka & Takeuchi, 1995), supports reflective practice within an organisation. Consequently, this management approach encourages reflective practice as a means of promoting organisational knowledge creation and innovation. As a result, the entire structure of the organisation is geared towards promoting knowledge exchange and conversion, by means of open dialogue. The TOKC addresses Schön's assertion that:

We might begin to heal the split in the field of management if we were to recognize that the art of management includes something like science in action. When practicing managers display artistry, they reveal their capacity to construct unique models and changing situations, to design and execute on the spot experiments. They also reveal a capacity to reflect on the meaning of situations and the goals of action. A more comprehensive, useful and reflective management science could be built by extending and elaborating on what skilful managers actually do. Practitioners might then become not only the users but also the developers of management science (Schön, 1983:266).

In other words, Nonaka *et al.* have developed a management approach that builds on the thinking of Polanyi and Schön, but which provides a structured approach to the utilisation of tacit knowledge in the management context. This management approach focuses on the utilisation of both tacit and explicit knowledge. In relation to the statement above, the purpose of this study is to understand and develop a management approach that will facilitate multi-practitioner arts-related PLR projects.

3.6.1 Reflective practice: disciplinary similarities

Although there are reflective practice procedures specific to each of these disciplines, resulting in underlying differences, there are also general underlying similarities. With regard to the similarities, reflective practice originates and investigates a particular

problematic issue, regardless of whether this problem is identified or created. It requires a conscious process of reflection-in-action and or reflection-on-action. This constitutes a transactional reflective conversation with the environment and/or the situation. For the most part, reflective practice is employed to investigate situations of uncertainty, instability and uniqueness (Schön, 1983:268), because a positivist approach fails to accommodate these important aspects.

In terms of the multi-practitioner arts-related PLR projects, conducted at the NWU, reflective practice and transactional reflective conversations were utilised to guide and manage these projects. As mentioned and as is explained in greater detail in Chapter eight, this occurred during the projects (reflection-in-action) and as a post-mortem (reflection-on-action) on the projects (Combrink & Marley, 2009:177-205; Greyling & Marley, 2009:1-30; Marley & Greyling, 2010:168-182).

Additionally, all reflective practice requires that the investigation is kept open for as long as possible. This implies that the practitioner should not enforce a predetermined hypothesis but rather, that they should be sensitive to situational feedback, which may cause a different framing and approach to the specific issue. During the investigation, the practitioner utilises their repertoire, which includes both practical tacit knowledge and more explicit theoretical knowledge. As such, this implies both the application of practice and theory and in some cases, the creation of new practice and new theory. This makes allowance for accommodation of unforeseen situational feedback necessitating the formulation of a new hypothesis. The physical process of investigation and experimentation is a threefold transaction moving through the phases of exploratory experiments, move testing experiments and hypothesis testing (Schön, 1983:270). As described in Chapter two, the multi-practitioner arts-related PLR projects conducted at the NWU were designed to facilitate the process of open-ended discovery.

3.6.2 Reflective practice: Disciplinary differences

Apart from the aforementioned similarities, there are also specific discipline related differences, such as the practitioners' use of media, language and repertoires to

describe reality and conduct experiments. A sculptor, for example, will conduct experiments in a very different way to the manager of a business. In the same way, the management of multi-practitioner arts-related PLR projects (which are geared towards generating research) would be managed differently to profit-driven projects.

Similarly, the appreciative systems that practitioners used in the reflective conversation are discipline specific. In order to effectively reflect-in-action, it is essential to have an appreciative system that function as evaluation criteria and, as such, makes the process of evaluation and re-evaluation possible (Schön, 1983:272).

The overarching theories, by which practitioners make sense of phenomena, are also used to direct reflection-in-action and reflection-on-action. The presence or absence of an overarching theory will consequently guide investigation and experimentation in a particular direction (Schön, 1983:274).

The role frames within which they set their tasks and through which they bind their institutional setting is of importance. As noted in the discussion of managerial practice, the context and functioning of an institution either inhibit or promote certain actions and practices. An organisation or institution may, for example, prioritise certain types of knowledge that would necessitate compliance with and or challenging of the *status quo* (Schön, 1983:274). In the academic context, it is necessary to find a position that accommodates both practice and the related theorisation thereof (Chapters four and five).

It should be noted that although media, language, repertoire, appreciative systems, overarching theory and role frames are discipline specific, this does not mean that they are not subject to change and are not constantly shifting (Schön, 1983:275).

3.7 Conclusion

In this chapter, the conceptualisation and functioning of tacit knowledge and reflective practice were discussed. The aim was to illustrate how tacit knowledge influenced the

conceptualisation of reflective practice. This is important as it is contended that these concepts underpin both PLR and the TOKC. Of significance here is that:

Tacit knowledge is recognised as having developed from a humanist tradition in which personal experience, prior learning, skill and the application of intuition are considered valuable sources of knowledge. This personal experience is informed by and integrated into or combined with theoretical constructs. Hence tacit and explicit knowledge are interrelated and intertwined. Here, the level of artistry and the practitioner's repertoire influence the level of tacit knowing.

In this sense, both Polanyi and Schön provide essential conceptual stepping-stones to advance the development of the TOKC and PLR. Polanyi contributes a means of understanding the structural dimension of knowledge; he introduced the proximal and focal dimensions of the tacit equation, which explains the notion that we know more than we can explicitly communicate. Additionally, he introduced the concept of indwelling as a way of accessing knowledge. Correspondingly, Schön elaborates on the utilisation of tacit knowledge and introduces the notion of reflective practice as a valid research activity. He also brings the related concepts of reflection-in-action and reflection-on-action, to the discussion.

It is in situations of uncertainty and unfamiliarity, in which the use of standard practice and theories are less useful or ineffective, that practitioners engage the proximal dimension by means of reflective practice. This is an exploratory process involving reflection-in-action and reflection-on-action, while conducting exploratory experiments, move testing experiments and hypothesis testing experiments that are not bound by the dictum of experimentation to establish objective truth. In this sense, the purpose of practice is to move from the present state to a desired one while responding to the feedback from the particular situation.

Creative practice, in this case, is considered a reflective conversation between the situation, the material and the self. Here, the artefact acts as a manifestation or

embodiment of tacit knowledge. In this scenario, the tacit dimension cannot be fully elucidated by explicit means. In other words, there is always a dimension of tacit knowledge that remains tacit and relies on communication modalities which relate to the discipline concerned.

Practicums, which are quite common in the creative practice educational scenario, introduce the notion that knowledge is a socially constructed phenomenon and that reflective practice may be used to challenge the dominant logic of an institution. Concomitantly, they are regarded as a mechanism for validating tacit knowledge and PLR in the institutional setting.

In terms of the management disciplines, the tacit knowledge of individuals may be harnessed and add value to the organisation if they are valued as a knowledge source and treated with dignity and respect. In order for this to happen in the institutional context, organisational culture, history, vision, mission and operational techniques must contribute to and facilitate the utilisation of tacit knowledge. As such, managers must actively create environments and activities that are conducive to and promote reflective practice. This notion of valuing the tacit knowledge of individuals and creating an environment which allows and promotes dialogue, knowledge sharing and reflective practice has been adopted and developed by Nonaka *et al.* and is discussed in more detail in Chapters six and seven.

However, in terms of the relationship between the creative disciplines and the management disciplines, there are significant disciplinary similarities, such as the functioning of reflective practice and the exploratory open-ended approach to problem solving. Accordingly, these management principles are also considered relevant to the conceptualisation, management and execution of multi-practitioner arts-related PLR projects.

For the purpose of this study, the execution of multi-practitioner arts-related PLR projects is considered to be, and is conducted as, an academic research activity.

Therefore, if tacit knowledge and reflective practice are considered fundamental to PLR, then an appropriate research context that accommodates and promotes these concepts, needs to be identified. Consequently, Chapter four addresses issues relating to research criteria and the identification of an appropriate research paradigm.

CHAPTER FOUR: THE IDENTIFICATION OF AN APPROPRIATE RESEARCH PARADIGM FOR THE UTILISATION OF TACIT KNOWLEDGE AND REFLECTIVE PRACTICE**4.1 Introduction**

As discussed in Chapter two, the execution of multi-practitioner arts-related practice-led research (PLR) projects at the North-West University (NWU) conducted by the subject groups History of Art, Graphic Design and Creative Writing, comprises a number of academic research activities that were designed to produce both tacit and explicit knowledge within the subject fields. In response to this, the conceptualisation of tacit knowledge and reflective practice were discussed in Chapter three. In this context, knowledge is viewed in holistic / non-reductionist terms, which requires a transactional interaction between the self, the materials and the situation. Knowledge exploration and generation is often a social collaborative activity. Effective knowledge communication requires multimodal formats that showcase both the tacit and explicit dimensions. However, an appropriate research paradigm that can be utilised in the academic context still needs to be clarified, with regard to the above-mentioned conceptualisation of knowledge.

This chapter addresses issues relating to research criteria and the identification of an appropriate research paradigm. Research criteria and the overarching research paradigms are discussed as a contextual background in order to position tacit knowledge, reflective practice and, by implication, PLR, within an appropriate paradigm in the university's academic research environment.

In furthering this discussion, this chapter is divided into two sections. In the first, the generally acknowledged nature of research is discussed in order to identify criteria that are appropriate in the academic context. The second offers an overview of five research paradigms in the interest of identifying the one that is most conducive to tacit knowledge, reflective practice and PLR.

The identification of an appropriate research paradigm for the creative disciplines is necessary because the forced integration of visual arts research into the university context since the 1990's (Biggs & Büchler, 2007; cf. Chapter five) did not allow for a gradual development of a research culture in the creative disciplines. As a result, creative practitioners drew heavily on the critical theory or post-positivist paradigms, which were not appropriate their needs. In this context, tacit knowledge inherent in the artefact, which is central to this type of research, may be viewed as a persistent anomaly. Therefore, tacit knowledge, reflective practice and PLR need to find a new paradigmatic home.

The five paradigms reviewed in this chapter indicate an intellectual shift from positivism to the participatory paradigm (Guba & Lincoln, 1994:112; Heron & Reason, 1997:290). Kuhn's (1970:77) notion of the scientific revolution is deemed relevant; when a scientific community is faced with persistent anomalies that do not fit into the specific paradigm in use, this may lead to a state of crisis that eventually leads to the development of a new paradigm or a paradigmatic shift.

The aim of this chapter is thus to identify a research paradigm and method which accommodate and facilitate tacit knowledge, reflective practice and, by inference, the management of multi-practitioner arts-related PLR projects. This is necessary as the research paradigm within which one functions permeates all decisions and actions and informs evaluation criteria (Lincoln, 1990:81; Kuhn, 1970:5). Many of the PLR-related issues considered problematic in the academic context are the results of researchers not being aware of their paradigmatic stance or functioning, or being forced to function within an inappropriate research paradigm. Additionally, in terms of managing multi-practitioner arts-related PLR projects, it is important to understand the general paradigmatic position of the disciplines involved. This chapter thus establishes a fundamental point of departure, which supports and underlies the exploration of PLR, the theory of organisational knowledge creation (TOKC) and the *Transgressions and Boundaries of the Page* (TBP) project in the subsequent chapters. The general notion of

research is the first item to be addressed here in order to establish this point of departure.

4.2 General conceptualisation of research

Research is perceived as a systematic and rigorous enquiry or investigation in order to discover new knowledge and understanding. This normally consists of a study of material in order to collect data, investigate and support findings, establish facts, gain information, or ascertain a different perspective. Therefore, we can state that research stimulates critical thinking. The purpose is to collate and compare old facts, findings, information and theories to reach or open up possible new conclusions, either by scientific study or by critical investigation (cf. Scrivener, 2009:69; Munro, 2011:156).

Durling and Neidderer (2007:7 cf. Douglas *et al.*, 2000) distinguish between research (with a small letter r as personal research) and Research (with a capital letter R as formal research). Personal research is characterised or viewed as research gains through personal knowledge and experience. This type of research does not necessarily contribute to the larger knowledge context. In other words, the type of knowledge gained might be new to the researcher but it does not add to the body of knowledge of the discipline (Biggs, 2003:3; Biggs & Büchler, 2007:66). On the other hand, formal research is conducted in the academic context and is consequently expected to make a contribution to the advancement of knowledge (Scrivener, 2009:70). Formal research must be made explicit and distributed to the research community or relevant discipline community (Borgdorff, 2011:54). The relevance of this range of research activities is also true of the creative disciplines (Douglas *et al.*, 2000). Additionally, correlations between the three types of experiments: exploratory experiments, move testing experiments (personal research) and hypothesis testing experiments (formal research) are evident (cf. Chapter three). According to Scrivener (2009:70), an activity is considered formal research when it is purposefully positioned and meets the following criteria:

1) A systematic investigation of a particular subject or phenomenon

This is considered the method condition and is related to the suitability of the method to achieve a logical, or at least defensible, answer to the phenomenon being investigated (Scrivener, 2009:70-71; Biggs & Büchler, 2008:10).

2) Conducted intentionally

The intentionality condition clause relates to the notion of identifying and answering a specific research question (Scrivener, 2009:70-71). Biggs (2006:3) concludes that a researcher should have the intention of claiming originality by disseminating a contextualised argument for peer review.

3) To acquire new knowledge, understanding, and insights

The quest for new knowledge, understanding and insight is the goal condition, which is related to contributing to the knowledge and knowledge accumulation of a particular academic community. The judgement of the newness or originality of knowledge is not a case of individual justification, but is validated by a community of research peers working in the same knowledge discipline. Such knowledge justification is a collective, collaborative and social activity (Scrivener, 2009:70-71; Biggs, 2006:2).

4) About a subject

This point refers to the subject condition, which contextualises the investigation within the framework of the discipline and academic community (Scrivener, 2009:70-71).

Reflecting on the above, formal research requires a contextualised problem or question as well as an aspiration to solve the problem and to determine possible answers to the question. In this regard, the researcher needs to understand the knowledge context as well as how and where to find the relevant information. Additionally, a method is required to extract, understand and contextualise the findings (Munro, 2012:26).

Formal research may be undertaken by either qualitative or quantitative methods, which will be indicative of the field of study and the different research approaches (Van Zyl, 2010:119). Each approach is specific to the types of questions asked and the results yielded by the research process. In other words, the operational application of these research approaches is linked to and guided by the research paradigm in which they are conducted.

Quantitative research delivers, or strives to deliver, objective and universally replicable facts or data by way of an empiricist method of research. This deductive approach relies on a stable, predictable world in which the hypothesis is tested against empirical evidence. The methodological approach is often the statistical analysis of data with the aim of establishing invariable laws (Haseman, 2006:1-2; Munro, 2012:25-26). This type of research is generally positioned within the positivist or post-positivist paradigm.

Fuelled by hermeneutics, qualitative research approaches have largely developed over the past century, which marks a departure from the positivist tendency. It is less concerned with the application of theory to achieve an objective truth (as is the case with quantitative research), but, rather, advocates a more subjective interpretative approach (people-centred), often associated with the humanities and social sciences (Munro, 2012:42). Generally, the aim of this more nuanced research approach is to seek, understand and question social, political and cultural phenomena (Borgdorff, 2011:51). In contrast to quantitative research, it is essentially concerned with how people experience the world, both individually and collectively; understanding, interpreting and adding meaning to these experiences. This interpretive approach leads to the building and application of theory (Munro, 2012:43) and embraces a wide range of methods but is generally dialectical and interpretive in nature (Haseman, 2006:1-2).

PLR is aligned more closely with the qualitative tradition associated with the arts and humanities. In this type of research, a wide range of research subjects, activities, experiences and methodologies is utilised in which conceptual and theoretical perspectives are employed. There is, however, an epistemic problem when relating PLR

to arts and humanities research. In the latter context, the artefact is often the object of study, read and mediated through a particular theoretical framework from an outsider's perspective that effectively eliminates the insider, self-reflective nature of tacit knowledge, reflective practice and PLR. This is problematic because, as stated earlier, in the context of this study, the creation of the artefact is considered as central to PLR. Accordingly, the artefact and related creative process constitute a personal exploratory journey, in which practice is contextualised by reflection-in-action and reflection-on-action. This contextualisation relies on both theory and practice to present a holistic and non-reductionist view of knowledge (cf. Borgdorff, 2011:56; Mäkelä & Routarinne, 2006:22-23; Scrivener, 2009:69). In this regard, I concur with Kleinbauer (1995:38) who states that most researchers make use of a combined intrinsic-extrinsic approach. Additionally, I agree with his view that an artwork may be considered an historical document that demands investigation and interpretation (Kleinbauer, 1995:2). However, the reflective process of the practitioner is an intimate and exploratory process, which provides insights through the process of making. This unique process is eminently different from and cannot be emulated by any art historical reading. This is not to say that the one is more relevant than the other, but that they are different; it is in this difference that each approach is able to individually or collectively contribute to knowledge and possibly innovative hybrid research approaches. Hence, the next section consists of a review of the five research paradigms in the interest of establishing which is best suited to accommodating PLR.

4.3 Introduction to research paradigms

The conceptualisation of a research paradigm is related to the fundamental understanding and operational application of an ontological, epistemological and methodological stance. The ontological question is concerned with the nature of reality and consequently, with what it is possible to know.

The epistemological question relates to the relationship between the knower / inquirer and that which is knowable. It is essentially concerned with what knowledge is, how it is acquired and how we know what we know. Muljadi (2011:1) makes the distinction

between “knowledge that” and “knowledge how”. In clarifying this point, Polanyi (1962, 2-3) states that knowing the laws of physics which enable someone to ride a bicycle (knowledge that) cannot be substituted for knowing how (knowledge how) to ride one. Therefore, it stands to reason that there are different ways of acquiring knowledge, which are related to the objective of such knowledge and the context in which it is used. In other words, knowledge is related to our conceptualisation of our worldviews or pre-scientific presuppositions (cf. Blackburn, 2005:118). Moreover, it may be said that knowledge is informed by, and forms belief, as well as what we believe to be true; that epistemology is constrained and guided by ontology.²⁰ As will become evident from the subsequent discussion, different paradigms represent different worldviews and accordingly, different ontological and epistemological positions. Therefore, that which can be known about reality is constrained by that which one believes reality to be.

The third question concerns the methodological approach, is inhibited by the first two and is concerned with the method of *how* to gain knowledge. In other words, it refers to the identification of the methods available to the knower/inquirer within the framework of their ontological and epistemological beliefs that may be applied to gain knowledge (Guba, 1990:18; Guba & Lincoln, 1994:108; cf. Kuhn, 1970:7-11).

Heron and Reason (1997:286-291) added a fourth stance, namely the axiological question. Axiology has to do with the value of knowledge and deciding which knowledge is intrinsically worthwhile for the “flourishing of humanity”. While the first three questions are concerned with the nature of social truth, the fourth is concerned with the value of knowledge in the participatory social construct. It also deals with how this type of knowledge may be meaningful as a human endeavour (Heron & Reason, 1997:287). Knowledge, in this sense, is not merely propositional but is a more holistic or non-reductionist concept that includes experiential and practical knowing.

²⁰ Epistemology, derived from the Greek *epistēmē*, which means “knowledge”, is the theory of knowledge of which the central questions include the origin of knowledge, the place of experience in generating knowledge, and the place of reason in doing so. Epistemology also includes the relationship between knowledge and certainty and between knowledge and the impossibility of error; the possibility of universal scepticism and the changing forms of knowledge that arise from new conceptualizations of the world. Ontology is derived from the Greek word for “being”. Since the seventeenth century, ontology has been a branch of metaphysics that concerns itself with what exists (Blackburn, 2005:118, 261).

As stated earlier, the paradigms considered significant in this context are those identified and discussed by Guba (1990), Guba and Lincoln (1994) and Heron and Reason (1997). These theories are positivism, post-positivism, critical theory, constructivism and the participatory paradigms. The scientific worldview discussed in Chapter three is aligned with the positivist and post-positivist paradigms, while the more interpretive paradigms, constructivism, critical theory and the participatory paradigms, are indicative of the more humanist approach.

It should be noted that Guba (1990), Lincoln (1990) and Guba and Lincoln (1994) considered the first four paradigms sufficient to frame research activities. However, in their critique of Guba and Lincoln, Heron and Reason (1997) have added an additional paradigm, namely the participatory paradigm. They contend that the above-mentioned paradigms do not adequately account for experiential and practical knowing, which can be related to tacit knowledge and reflective practice. Mouton (1996:14) describes this range of paradigms as a spectrum with the positivist position at the one end and the interpretive sciences at the other. This spectrum typically evolves due to the emergence of a problematic aspect/issue within a particular paradigm, which facilitates new thinking and the eventual development of a new paradigm equipped to accommodate the new phenomenon (cf. Kuhn, 1970:23). The construction and conceptualisation of paradigms is thus a dynamic and evolving process (Guba & Lincoln, 1994; Mouton, 1996:15; Kuhn, 1970:76). In this respect, Kuhn (1970:11) states that the maturation of science is indicated by the evolution of and transition from one paradigm to another, via revolution.

Positivism was the predominant paradigm from the seventeenth century to the late 1940s, when post-positivism started to gain favour. For the most part, post-positivism currently still maintains a strong position of power, controlling funding sources, publication outlets and academic committees. It was not until the 1980s' that this position of prominence began to be challenged by the more interpretive research paradigms (Guba & Lincoln, 1994:116). Subsequently, both critical theory and constructivism have gained ground over the past decades and are establishing a growing power base, thus strongly challenging the dominant logic of traditional theory.

According to Heron and Reason (1997:290), the participatory paradigm is emerging but is viewed as a counterculture in Western academia due to its emphasis on experiential and tacit knowledge. Nevertheless, the emergence of PLR since the 1990's is indicative of the need for a research paradigm that accommodates a combination of the experiential/tacit and explicit. There are many articles and much debate with regard to the terminology used to describe research in the creative disciplines and the associated research methods (cf. Biggs & Büchler, 2007; Farber & Mäkelä, 2010; Doman & Laurie, 2010; Borgdorff, 2011; Munro, 2011). However, minimal literature exists concerning its paradigmatic foundation and it should be noted that the introduction of PLR into the South African academic context lagged approximately twelve years behind international trends. It may therefore be concluded that the scientific paradigms are still influential in this geographic context.

Notably, in *Visualizing Research*, Gray and Malins (2004:20) refer to the paradigmatic enquiry table devised by Guba and Lincoln (1990:78) (containing a description of positivism, post-positivism, critical theory and constructivism) where they add a fifth blank column entitled *Artistic?* Thus, they are implying that these paradigms are not suitable for PLR and that there is a need for a fifth paradigm that would answer to the need. Additionally, Haseman (2006) and Biggs and Büchler (2011), who seem to be contextualising PLR within the critical theory and post-positivist paradigms, have also expressed the need for a more appropriate paradigm. As mentioned, it is contended that the manner in which the creative disciplines were integrated into the university context initiated the adoption of the critical theory paradigms, which are generally employed by the related History of Art disciplines. As such, the creative disciplines, rather than gradually developing an appropriate research culture, tried to adapt to this dominant research paradigm. It is argued that this situation still persists and is resulting in an epistemological crisis because the critical theory paradigm does not sufficiently accommodate the tacit dimension. In this research, the participatory paradigm, which does accommodate the said dimension, is considered a conducive one for research. In this regard, I concur with Kuhn (1970:17) who suggests that for a paradigm to be accepted, it needs to be more appropriately suited to the research objectives of a

discipline than its competitors are. It is my contention that the participatory paradigm as conceptualised by Heron and Reason (1997:289) addresses this “Artistic?” knowledge gap identified by Gray and Malins (2004:20) because this paradigm accommodates the insider artistic perspective and acknowledges the artefact as a representation of an important knowledge facet. In other words, the participatory paradigm, which has its origins in the Romantic / humanist stream of thought discussed in Chapter two, is a more conducive intellectual stream for the introduction of a tacit knowledge framework and the development of PLR. In order to clarify this assertion, a discussion of the five paradigms is presented below. Table 1 at the end of this discussion incorporates the participatory paradigm column that Heron and Reason (1997:289) have added. In addition, a row for axiology has been added to the original Guba and Lincoln (1994:109) version.

4.3.1 Positivism

The first paradigm to be addressed in this table is positivism. As mentioned, historically, the positivist paradigm has been associated with quantitative research and has been used to explain natural phenomena by the natural sciences. This research approach is concerned with the delivery of, or search for, hard, objective, factual results by means of an exact, rigorous methodology and empirical logic, as explained in Chapter three (cf. Phillips, 1990:39). This research is a cumulative process, building on or refuting the logic of others and reporting its findings in explicit terms.

Ontologically, positivism rests on the premise that reality exists and is controlled by immutable natural laws, which may be observed and are often generalised as patterns of cause and effect (Guba, 1990:20; Lincoln, 1990:77; Mouton, 1996:15). Epistemologically, knowledge is only valid if obtained from a non-interactive, objective distance. Consequently, thoughts concerning emotions and feelings are excluded from this equation (Henning, 2004:17).

Methodologically, a propositional hypothesis is posed in advance and subjected to controlled experiments in order to verify or refute its validity (Henning, 2004:17).

Although practical experiments are frequently utilised in this type of research, it is undertaken as an objective, controlled, empirical experiment. The specific method used must be rigorously recorded and if repeated, must achieve the same, transferable result (Schön, 1983:144-145). In terms of the axiological dimension for both the positivist and post-positivist paradigms, knowledge about the world is considered to be an end in itself and intrinsically valuable for humanity

Therefore, the positivist paradigm is typified by a realist ontology and objectivist epistemology, employing controlled experimental methodologies to predict and control natural phenomena. It consequently does not accommodate the more emotive tacit knowledge modalities such as lived experience and personal reflective practice, which are integral to research in the creative disciplines.

4.3.2 Post-positivism

The majority of research undertaken after the Second World War (therefore, from the middle of the 20th century) was fuelled by the changing socio-political climate that has been characterised by the rejection of positivism and the introduction of post-positivism (Gray & Malins, 2004:19; Mouton, 1996:19). This altered position continues to recognise the untenable assumption or assertion of an absolute universal truth and the attainment of the scientific utopian vision (Henning, 2004:19).

Post-positivism strives to warrant knowledge by accumulating a weighty body of evidence that justifies the argument. In contrast to positivism, post-positivists appreciate that this knowledge may be challenged. Additionally, post-positivism rejects the notions of pure observation and theoretical neutrality. This paradigm accepts the notion that theoretical conjecture may lead to discovery (Phillips, 1990:32). The recognition of discovery as a valid research avenue was an important aspect of post-positivism. Guba articulates this as follows:

Discovery, that is, the process by which a priori theories and implied questions and hypotheses emerge, is not a formal part of the conventional paradigm (positivism). Discovery is merely a precursor rather than an integral part of the scientific process, whose purpose is solely verification (falsification). But this position is immediately seen to be absurd when one considers that most of the important

advances of science have been made via the creative discovery route rather than by the more mundane and plodding verification route (Guba, 1990:22).

Guba (1990:23), somewhat critically, views post-positivism as a "softened version" of positivism, which is premised on the same basic beliefs. Contrary to Guba, though, Phillips (1990:38-44) views post-positivism as a significant ideological and methodological advancement of positivism.

Ontologically speaking, post-positivism rejects the notion of naïve realism and replaces it with critical realism (Guba, 1990:20). Effectively, this means that the post-positivist paradigm recognises the fallacy of a so-called ultimate truth devoid of human and environmental influences. Epistemologically, objectivity; or rather, modified objectivity, remains the guiding principal. In this context, objective truth cannot be attained but it can be closely approximated, and verified by an informed critical community. Methodologically, the techniques became more qualitative with the introduction of modified experimentalism which accommodates more natural settings. However, the notion of experiential tacit knowledge remains incompatible with this paradigm.

4.3.3 Critical theory

The interpretative paradigms do not wish to uncover truth in the positivist sense. Generally speaking, the critical theory paradigm falls within this grouping, and is the first of these that will be discussed. There is the realisation that these paradigms are addressing realities, which are complex, and that the related interpretations are fallible and open to reinvestigation. Therefore, to various degrees, the insider perspective and the more naturalistic research settings are embraced. One of the driving forces of critical theory is to be found in the neo-Marxists who replaced the positivists' and post-positivists' empiricism with a dialectical notion of experience after the Holocaust. In this process, they developed their critical theory, which draws upon a critical dialectical-theoretical foundation based upon the notion of experience and which specialises in the investigation of societies and social problems and questions arising after the Second World War during the 1960's and 1970's (Horkheimer, 1972:42). In this context, the notion of experience of the other (*das Nichtidentische*), forms the basis of neo-Marxism and lays the foundation for the development of other dialectic theories, such as feminism

and post-colonialism. According to Guba (1990:23) and Borgdorff (2011:48), critical theory is used as an umbrella term to include specific critical theories such as neo-Marxism, feminism and semiotics, to name a few. Both these theorists view the term critical theory as problematic and Guba (1990:23) contends that the term “ideologically orientated enquiry” might be more appropriate. While Borgdorff (2001:48) proposes “grand theories of our culture,” these theories are paradigmatically grouped because they collectively reject the objective empirical knowledge and claims of truth of the positivists and post-positivists.

Critical theorists interrogate and deconstruct complex socio-political, cultural, historical, ethical, and gender issues through the imposition of a selected theoretical framework (Guba, 1990:23). These theories are constructs reflecting the subjective values of those who constructed and utilise them. Depending on the particular theoretical perspective, a particular agenda is promoted and, as a result, certain individuals are empowered while others are disempowered. This results in what could be regarded a political act (Guba, 1990:24; Lincoln, 1990:71). Such an undertaking is aimed at empowering the oppressed and unenlightened, raising them to a level of “true consciousness” which will allow and enable them to transform the world (Henning, 2004:23). In this context, engaging in a critical dialectical process of deconstructing and reconstructing the world creates knowledge and understanding. Interestingly, the critical theorists seem to believe that objective reality is a state of false consciousness. Guba describes this as follows:

... one might expect critical theorists (ideologists) to reject a realist posture. For, if there is a real state of affairs then, it seems unreasonable to argue that value positions that inquirers might take could influence it. Moreover, a real reality requires an objective epistemological approach to uncover it – as positivists and post-positivists have claimed all along. But, for whatever reason, critical theorists (ideologists) have elected to believe in an objective reality – as the phrase commonly used by them, “false consciousness,” readily demonstrates because it implies that there is a “true consciousness” somewhere “out there,” or more likely, possessed by the inquirer or some better-informed elite (Guba, 1990:24).

Ontologically speaking, Guba (1990:25) initially categorises critical theorists as critical realists, as is the case with the post-positivists. However, the term critical realists was revised to that of historical realism (Guba & Lincoln, 1994:110). Historical realism or

reality refers to an apprehendable reality that has been reshaped over time by social, political, cultural, economic, ethical, and gender factors into structures that are inappropriately accepted or considered real.

Epistemologically, critical theory is mediated enquiry that is theory driven; it is a subjective, transactional and transformative process, influenced by the inquirer and the theoretical framework used. In this sense, the notions of ontology and epistemology are theory related and entangled (Guba, 1990:25; Guba & Lincoln, 1994:110).

Methodologically, critical theory involves the use of the theory to expose the false consciousness of what is or what was considered real in order to initiate and facilitate transformational understanding (Guba, 1990:25). This process is dialogical and dialogical as it necessitates transactional dialogue between the researcher and the subject of enquiry (Guba & Lincoln, 1994:110). Consequently, theories such as semiotics, deconstruction and post-colonialism are used to interpret artworks and art practice. However, this is generally conducted at a theoretical distance and meaning is assigned according to a particular theoretical perspective and recorded and disseminated in textual formats (Borgdorff, 2011:48). Scrivener claims:

However, the art literature is largely comprised of claims to knowledge of what artworks mean, etc., and justifications of those claims. In short, the art literature comprises a "body of knowledge" about art and artists produced by a separate knowledge acquisition discipline that takes these phenomena as matter for study (Scrivener, 2002:7).

While the above-mentioned theories as well as other theories could prove useful for practitioners to inform and understand their own creative process and production, creative practice and personal reflective practice are needed to support this process (Borgdorff, 2011:51; Munro, 2012:4). As a result, the critical theory paradigm is not ideally suited to utilise personal tacit knowledge that is accessed by means of personal indwelling and reflective practice.

In terms of axiology, the critical theory and constructivist paradigms facilitate propositional, transactional knowing. Their value as a human endeavour is in the instrumental application of theory in the aid of social change and / or emancipation.

4.3.4 Constructivism

The constructivist point of view correlates with that of the critical theorists in that its adherents also reject the objective, value-free assumptions of positivism and post-positivism. Additionally, they concur that reality can be viewed through a theory or value window. However, they believe that there are multitudes of competing, and often conflicting, realities requiring consideration when conceptualising a picture of reality (Lincoln, 1990:73). In other words, a host of mental constructions that exist are influenced by socio-political and cultural constructs (Guba & Lincoln, 1990:110). Consequently, reality is made up of multiple changing perspectives; knowledge is thus negotiated and changing in this context. Guba stated in this regard:

Further, it makes the findings of an inquiry not a report of what is “out there” but the residue of a process that literally creates them. Finally, it depicts knowledge as the outcome or consequence of human activity; knowledge is a human construction, never certifiable as ultimate truth but problematic and ever changing. (Guba, 1990: 26)

The constructivist paradigm facilitates an understanding of conflict and agreement at a particular place and time. Ontologically, constructivists are obliged to adopt relativism, as the mechanism for searching multiple realities to construct a more refined, sophisticated construct (Lincoln, 1990:73, 77). In this context, realities are multiple and exist in people’s minds, both individually or in group contexts (Guba, 1990:26; Guba & Lincoln, 1994:110-111). These constructions and their associated realities are alterable. The aim is not to predict or control the real world but rather to reconstruct it at a particular time, as it exists in the minds of the constructors (Guba, 1990:27).

Epistemologically, constructivism accepts the notion and process of transactional subjectivity. In this paradigm, the investigator and the investigated are inextricably linked and the findings are literally created or constructed as the investigation progresses. In

this process, the distinction between ontology and epistemology disappears (Guba & Lincoln, 1994:111).

Methodologically, the aim is to interpret various perspectives by means of hermeneutical and dialectical methods in order to generate a construction of reality with which there is a substantial agreement. Lincoln explains it as follows:

The variable and personal nature of social constructions suggests that individual constructions can be elicited and refined only through interaction between and among investigator and respondent. These varying constructions are interpreted using conventional hermeneutical techniques, and are compared and contrasted through a dialectical interchange. Research in this context is not laboratory bound but occurs in more natural settings in an attempt to capture a more holistic picture of realism (Lincoln, 1990:78).

4.3.5 Participatory paradigm

The participatory paradigm is the last to be presented here. I contend that this is the most suitable fit for reflective practice, tacit knowledge and the management of multi-practitioner arts-related PLR projects. Hence, this paradigm will be discussed more thoroughly than the others.

The worldview that underpins the participatory paradigm is fundamentally experiential in that it is concerned with the way in which we interact with others and the world. The neo-Marxists' development of their critical theory based upon the notion of the experience of *das Nichtidentische*, after the Second World War, as mentioned above, is viewed as a fundamental stepping-stone towards the development of the participatory paradigm.

Our experience of reality is not a mental construction as the constructivist might argue but, rather, is based in experiencing the world and others. Although this experience can be represented in the symbolic forms of art and language, it exists prior to it (Heron & Reason, 1997:276). Even though the participatory paradigm shares the notion of self-reflectivity with the constructivist paradigm, it is more inclusive since it presents a construction of a reality that emphasises bodily experience and the interaction with others and their realities, or as stated, in reference to constructivism:

The participatory worldview, with its emphasis on the person as an embodied experiencing subject among other subjects, its assertion of the living creative cosmos we co-inhabit, and its emphasis on the integration of action with knowing, is more satisfying (Heron & Reason, 1997:275).

Consequently, a subjective-objective ontology is assumed in the participatory paradigm. This means that we actively experience and engage in the world and with others in it. Our image of reality is created by experience, thought, the world and the people we encounter. This image is subjective but co-created with others; our interaction with them thus creates multiple perspectives. Encounters with the world are enhanced by sensory experiences that inform us, not only about ourselves, but also about others and about the world. Essentially, people understand the world and other people by interacting in an inter-subjective field. Understanding is facilitated by commonalities and differences, shared cultural beliefs, norms, language and art (Heron & Reason, 1997:280).

In this sense, Polanyi's (1966b:30) notions of personal and exploratory indwelling and Schön's (1983:79) notions of reflective practice and reflective practicum correlate with and can be accommodated in the participatory paradigm. This is due to the fact that all of these concepts advocate the utilisation of personal experience derived from intuition, feeling, skill and bodily knowledge. Additionally, reflective practicum and the notion of exploratory indwelling are particularly relevant to the creation of inter-subjective fields that promote knowledge creation and sharing. In this context, the researcher/practitioner, both individually and in collaboration with others, is viewed as an agent of change who engages in a reflective conversation with the self, others and the situation.

Epistemologically, the participatory paradigm is categorised as critical subjectivity encompassing four ways of knowing. Due to its subjective-objective ontology and non-reductionist conceptualisation of knowledge, it may be argued that there need to be multiple ways of knowing which originate in the experiential dimensions. Thus, the knower interacts with the world by means of four interrelated knowledge modalities, namely experiential, presentational, propositional and practical knowing (Heron &

Reason, 1997:280). The purpose is to be aware of the four ways of knowing and use them to communicate reality as accurately as possible.

These four ways of knowing act as counterbalances, each reducing the possibility of biased interpretations.

- 1) Practical knowledge is the ability to execute a particular practical skill. It is often grounded in experientially and propositional knowing and comes to fruition in presentational form, the level of which is determined by the practitioner's repertoire (Polanyi, 1962:6; Heron & Reason, 1997:281). Other terms used to describe this type of knowledge are procedural knowledge and skills knowledge (Niedderer, 2007:9). Experience, practice (rehearsal), talent and its congruent integration of theoretical constructs enhance the quality of practical knowledge. This notion of practical knowledge is similar to Schön's (1987:22) concept of artistry introduced in Chapter two.
- 2) Experiential knowledge is the understanding of our experiences and the process by which we arrived at that understanding. It is derived from the world and the people in it. According to Niedderer (2007:9), terms such as embodied knowledge, personal knowledge, tacit knowledge, implicit knowledge and experiential knowledge are synonymously used. Experiential knowledge is a personal resonance with reality through experiential and perceptual enactment (Heron & Reason, 1997:281). Experiential knowledge is often pre-linguistic and relies on a communally understood substrate of non-linguistic expressive signs (Heron, 1996:206). The notion of the proximal and focal dimensions of tacit knowledge and indwelling (cf. Chapter three) is significant here (Polanyi, 1962; 1966a; 1966b). The proximal dimension is stored in memory and feeling and expressed by means of gesture, action and image. Although culturally contextualised, each person has an individual experience of the world and thus, a unique proximal store of knowledge. There is an interrelated and ambiguous relationship between shared and personal experience. Experiential knowledge challenges the body-mind duality by dwelling in the experience, thus allowing for the cohesion of the proximal and focal in the

comprehension of meaning. Although language is often used to try to express experiential knowledge, this communication is problematised by the reliance on the ambiguous pre-linguistic existence thereof. Consequently, presentational knowledge modalities are often used to communicate aspects of experiential knowledge.

- 3) Presentational knowledge is grounded in experiential knowing (Heron 1996:33-34/53). It involves the cognisance of meaning, patterns and patterns of meaning derived from experiential knowledge. As a result, presentational knowing taps into and revels in proximal variety and in the ambiguity of experiential knowledge. It presents experiential knowledge as metaphors and aesthetic creations, which may manifest as graphic, plastic, musical, vocal and verbal art forms (Heron & Reason, 1997:281). Therefore it does not try to control individual understanding or interpretation, but, rather, invites exploratory, imaginative and interpretive possibilities. In Chapter five, this discussion continues and relates to the notion of PLR being an exploratory journey resulting in the production of artefacts.

- 4) Propositional knowledge is a language-based statement usually embedded in theory or a theoretical construct. Some terms taken to be synonymous with propositional knowledge are conceptual knowledge, theoretical knowledge, explicit knowledge and declarative knowledge (Niedderer, 2007:9). In terms of the participatory paradigm, it can be concluded that written statements and / or theories are derived from experiential and presentational knowledge and communicated linguistically. Language is thus a tool to contextualise and clarify meaning and direct attention to related contextualised meanings, concepts and interpretations (Heron & Reason, 1997:281).

The use of language, which consists of a more congruent syntax between symbols and that being described, is useful for communicating unambiguously. This perceived universality of linguistic communication is why it is so valued and prioritised in the academic context (Nonaka & Von Krogh, 2009:636). However, language cannot

adequately communicate all aspects of presentational, experiential and practical knowledge. There are two complicating factors. The first is the variety and multiplicity of interpretive possibilities nested within experiential and presentational knowledge. Second is the inadequacy of language to capture pure experience or practice. Although text can inform and influence the experience of listening to music or viewing a painting, it cannot be substituted for the actual experience. Therefore, there is a need to use multimodal tacit communication modalities in combination with propositional knowledge. As discussed earlier, this double articulation of the tacit and explicit dimension is fundamental to tacit knowledge, reflective practice and PLR.

Knowledge interaction in this paradigm is conceptualised by means of the bipolar congruence (Figure 4) and the bipolar congruence as dialectical process models (Figure 5) (Heron, 1996:167). In the first instance, knowledge possesses a consecutive four-tier pyramidal structure in which it is grounded and supported by the underlying layer. In this way, experiential knowledge supports and grounds presentational knowledge, which, in turn, supports and grounds propositional knowledge. The latter also serves the same function for practical knowledge.

This model demonstrates that practical knowledge is the culmination and consummation of the underlying layers (Heron, 1996:166). One may assume that the strength and extent of the base will ultimately determine the structure's height and thus the quality of knowledge. In the second instance, bipolar congruence as a dialectical process is similar to the previous model because each knowledge modality leads into and informs the next (Heron, 1996:167). However, this is a more dialectic and inter-changeable visualisation that does not focus specifically on practical knowledge as the apex of the process. This second model is regarded as more indicative of the way in which (how) knowledge interaction occurs in reality and is considered more relevant in the context of this study.

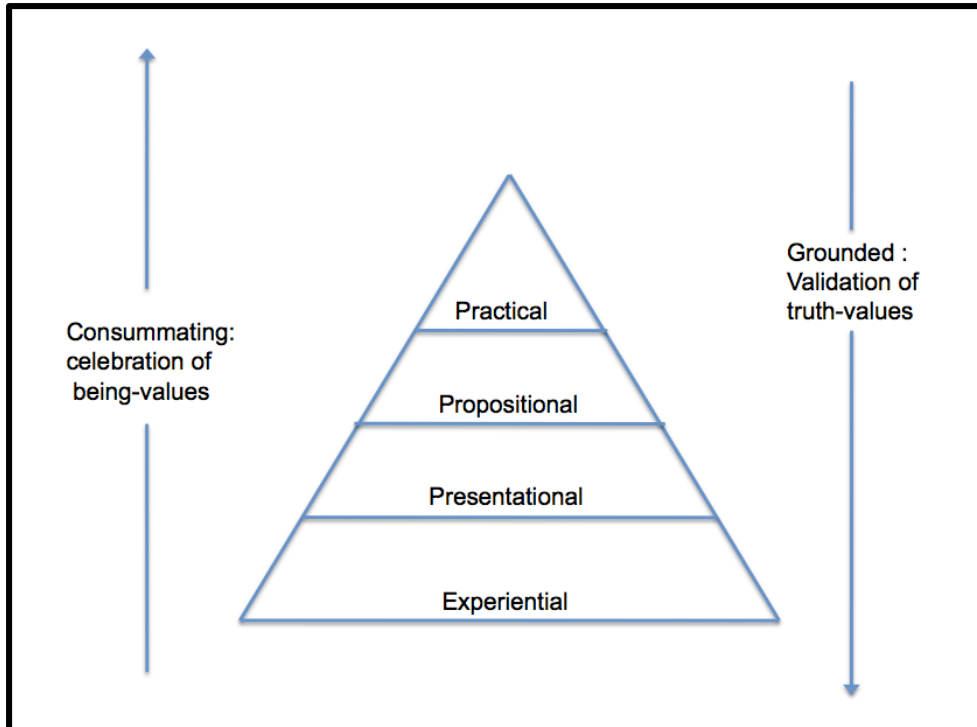


Figure 4: Bipolar congruence (Heron, 1996:167)

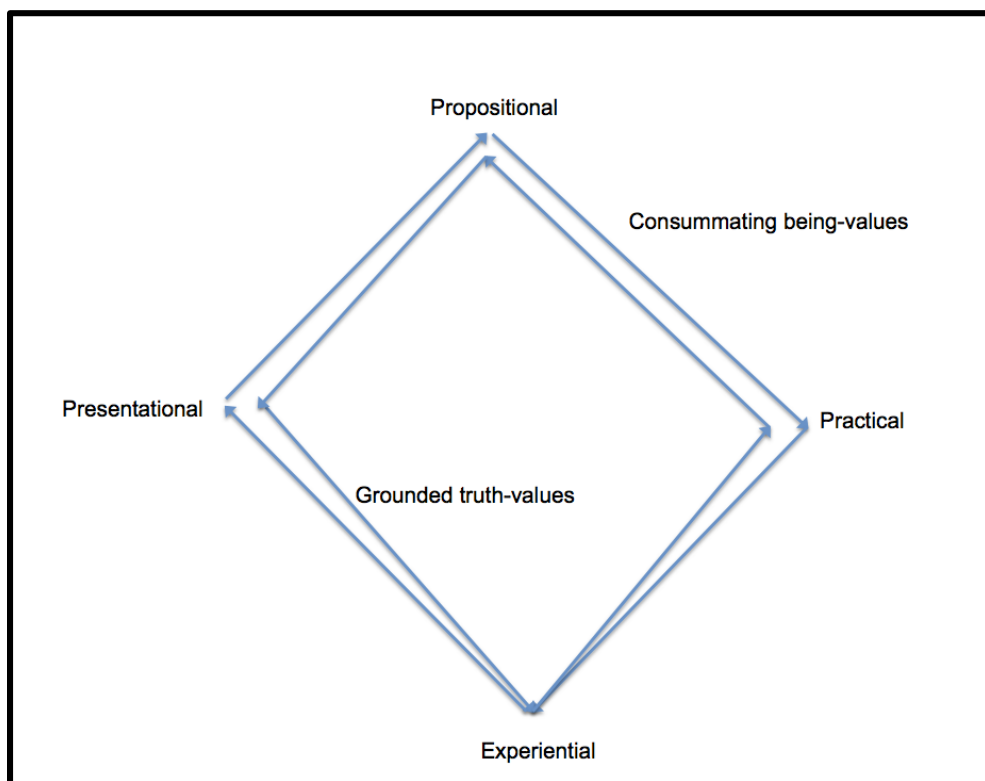


Figure 5: Bipolar congruence as dialectical process (Heron, 1996:167)

To summarise the epistemological aspect of the participatory paradigm, knowledge is conceptualised as a holistic, integrated construct (Polanyi, 1962; 1966a; 1966b; Nonaka & Takeuchi, 1995; Heron, 1996; Heron & Reason, 1997; Niedderer, 2007). While Polanyi (1958; 1962) acknowledges the inextricability of the tacit and explicit knowledge dimensions from one another, Heron (1996) offers a more nuanced development of tacit knowledge: he proposes a more subtle epistemological division by distinguishing between experiential, presentational, propositional and practical dimensions. It is recognised that these knowledge dimensions are interrelated. However, experiential, presentational and practical knowledge gravitate more to the tacit dimension while propositional knowledge is associated with explicit knowledge. Additionally, the four knowledge distinctions are considered valuable in terms of PLR since they facilitate a more refined discussion of knowledge as a holistic construct. Presentational knowledge, for example, could refer specifically to the visualisation or visual form of the artefact and the aesthetic and conceptual patterns recognised therein.

The participatory paradigm involves and utilises an epistemology grounded in critical subjectivity, which involves attending to these forms of knowledge and their relationship in order to establish a means of knowing the world. Using this paradigm, the combination of knowledge forms delivers a more holistic picture of situations and events, not merely the propositional dimension. Therefore, knowledge is the product of shared experience and linguistic cultural constructs. It is an inter-subjective activity, regulated by the critical evaluation of one's actions and the actions of others.

Methodologically, the notion of critical subjectivity informs the participatory paradigm which is shaped by the four interacting modalities. Researchers and co-researchers work collaboratively in a reciprocal and inclusive dialogue that is democratic in nature and facilitates critical inter-subjectivity.

The principals of epistemic and political participation guide this type of enquiry. Herein lies the difference between the constructivist and participatory paradigms. In epistemic participation, the researcher's experiential knowledge is the foundation of propositional

knowledge. In terms of political participation, the subject's right to participate and assist in the research design is respected and encouraged. The combination of these two principles results in the researchers also standing in as subjects, so that the researcher is also the subject (Heron & Reason, 1997:283-284).

According to Heron and Reason (1997:284-285), these two principles do not apply to the majority of constructivist research. In constructivism, the researcher and the subject have a co-researcher relationship but the researcher is not the subject of the research. The propositional knowledge generated is based in the knowledge of others, not in the experiential knowledge of the researcher. Therefore, for the most part, the experiential knowledge of the researcher is considered less important. Additionally, the subject is not involved in the research design process.

The notions of reflective practice and indwelling, aimed at utilising the experiences and expertise of the practitioner, accommodate the interrelated object/subject conceptualisation of the participatory paradigm. Additionally, knowledge is acquired in communities of enquiry embedded in communities of practice (Heron and Reason, 1997:290). This correlates with the collaborative nature of knowledge creation advocated by reflective practicums (cf. Chapter three).

Consequently, Heron (1996) and Heron and Reason (1997) conceptualised the co-operative enquiry, which is emergent from and attuned to the participatory paradigm. The co-operative enquiry is particularly relevant for multi-practitioner arts-related PLR projects because it involves two or more people researching a topic or issue from an insider, critical, objective-subjective point of view that prioritises experiential and practical knowledge. This method entails members working collaboratively in a reflective, corrective, inter-subjective cycle that attempts to validate research findings. Each member is thus a co-researcher and co-subject, while the notions of self and group reflexivity are applied. The co-operative enquiry is planned and executed in four phases.

- 1) During the first, the topic and type of enquiry is identified and framed. The aims and objective are formalised and an action plan is put into place. Additionally, issues such as identifying participants, launch procedures and the length of reflective cycles are addressed. The identified participants will help to reframe and modify the area of investigation and decide on a strategic focus. This entails determining whether the project and collaborative model will be convergent (working very closely on one topic) or divergent (working more individually) but converging to discuss and reflect at salient points in the investigation, or a combination of the two (Heron, 1996:75-78).

- 2) The second is the initial action phase where participants are required to engage in action and reflection, utilising and integrating their investigative skills. The aims and objectives presented in phase one are used as guidelines but participants are accorded the freedom to discuss, reflect and adapt according to the experiential practical issues that manifest themselves. This is also true in subsequent cycles. It is of importance that data generation and recording be appropriate to the context and content of the study in this phase. Media or a combination of media that record a full range of human interaction should be used (Heron, 1996:80). Media such as video, sound recording, drawing and the like, are regarded as valid.

- 3) During the third phase of the investigation the researchers immerse themselves in the topic and process, experiencing novel and informative transformational practice. In that the inquirer is required to be open to feedback from the situation, the process often leads to innovative and unpredicted paths of investigation (Schön, 1983; 1987). Dialogue and interaction may reconfigure the aims and objectives; thus, this phase requires the valuing of past and lived experience by means of individual and co-operative indwelling and the creative refashioning of the world. According to Heron (1996:85), inquiries focusing on creative practices represent the most complete account of co-operative enquiry. Concomitantly, this view, in combination with the epistemic commonality, reaffirms the relevance of the participatory paradigm for PLR. Heron (1996:88) concludes that, with reference to

the utilisation of presentational knowledge, methods such as drawing, painting, photography, sculpture, dance and multi-sensory descriptions are relevant to this phase and paradigm. However, he states that:

...I don't know of any inquiry where this has been done, because of the Aristotelian prejudice, in old and new paradigm research cultures alike, in favour of the propositional. But, somewhere the opportunity beckons (Heron, 1996:89).

It is contended that this opportunity beckons to creative practitioners engaging in PLR if they position themselves in the participatory paradigm.

- 4) Phase four constitutes the second reflective phase in which participants regroup to make sense of the preceding enquiry, actions and experiences. The participants share their experiences and data in whichever format most effectively communicates their enquiry. This shared experience facilitates the identification of conceptual patterns and may lead to both individual and group adaptations of the methods of enquiry. Finally, the way in which the four phases will be repeated, is planned²¹.

There is a distinct correlation between the four management phases used to manage the multi-practitioner arts-related PLR projects detailed in Chapter two and the four phases of the co-operative enquiry as discussed above. The multi-practitioner arts-related PLR projects conducted at the NWU in the subject groups History of Art, Graphic Design and Creative Writing, as indicated earlier, were not specifically designed with a theoretical awareness of the phases of the co-operative enquiry. However, both approaches are grounded in a tacit framework, which facilitates a move from the experiential (tacit) to the propositional (explicit) knowledge modalities.

²¹ The co-operative enquiry shares commonalities with other research modes such as action research, which utilises a similar four phase: "Plan", "Act", "Observe" and "Reflect" process. Additionally the notions of self-reflection, self-evaluation and self-management of collaborative practice and decision-making and action (Altrichter, *et al.*, 2002:130) are similar. However, it is the cognisance and utilisation of the extended epistemology that makes the co-operative enquiry more relevant in the investigation of PLR.

Additionally, it is contended that the TOKC addressed in Chapters six and seven can be considered a type of co-operative enquiry. The reason for this is that the TOKC acknowledges the tacit origins of knowledge and enables the progression from tacit to explicit knowledge by means of four knowledge conversion levels. Furthermore, the notion of social interaction and reflective practice as knowledge generating activities is fundamental to both approaches.

What makes the TOKC specifically relevant in the context of this research is its more finely grained conceptualisation of the knowledge conversion process. In other words, the TOKC provides knowledge conversion mechanisms and related activities specifically conceptualised to manage the related phases of a project. Co-operative enquiry is of importance, as it is a method that has its origins in the participatory paradigm. Consequently, if one positions PLR in the participatory paradigm, it stands to reason that a method to manage multi-practitioner arts-related PLR projects should also fall within this paradigm.

In light of the axiological question discussed earlier and the epistemic and political principles, the participatory paradigm's aim of enquiry has more in common with the critique and transformation of society proposed by the critical theorists. However, this paradigm does not advocate an outsider perspective, which is often the case with critical theorists. The participatory paradigm advocates a collaborative process that utilises repeated cycles of self, and group reflexivity in which the researcher is often co-researcher and co-subject. This, in itself, functions as a control mechanism to ensure the validity of such research. In this scenario, peers offer advice, support, encouragement and creative feedback in the knowledge creation process (Heron & Reason, 1997:287).

In light of the above, the participatory paradigm is a worldview based on a subjective-objective ontology which allows for a critical subjectivity epistemology that utilises experiential, presentational, propositional and practical ways of knowing. A co-operative relationship between the researcher and research subject is the foundation of this

methodology. All of the above dimensions are buttressed by the affirmation of the value of practical knowledge to facilitate human flourishing. This paradigm, with its holistic, socially constructed conceptualisation of knowledge, is ideally suited to accommodate the notions of tacit knowledge and reflective practice.

In the next section, I briefly discuss the ontological, epistemological, methodological and axiological dimensions of each paradigm in relation to one another. This discussion is reflected in the material provided in Table 1.

4.4 Consolidating paradigmatic views

If one considers all five paradigms in terms of ontology, epistemology, methodology and axiology, then the philosophical shift from positivism to the participatory paradigm becomes evident.

4.4.1 Ontology

Naïve realism is the ontological position from which the positivists engage with an external reality from an objective vantage point. Post-positivists also believe in an objective external reality. However, they assume a critical realist position in that they concede that the real cannot be perfectly apprehended. For positivists and post-positivists, the voice of the enquirer may be viewed as that of the indifferent or detached observer scientist. The subjective personal voice is suppressed and ignored. Hence it is scientific information that guides decision-making.

The critical theorists assume a historical realist position and interrogate reality through a particular theory window. Thus, reality is comprehensible through a historical theory window (historical realism), influenced by socio-political and cultural events (cf. Borgdorff, 2011:48; Guba, 1990:3-24; Guba & Lincoln, 1994:110). The voice of the critical theorist is that of the transformational intellectual who theoretically, is trained to confront ignorance, misapprehension and injustice, while the development of further insight and understanding fuels change.

The constructivists, on the other hand, believe that reality is a human construction and that it consequently consists of multiple comprehensible realities. Accordingly, realism takes on a more sophisticated form as its constructors transform themselves. As a result, a shift from an external realism to one that is an internal mental construction occurs. The constructivist voice is one of the passionate participants involved in facilitating and reconstructing a multi-voice perspective, both individually and in combination with others. Change is achieved as new constructs are developed and individuals interact with these constructs (Guba & Lincoln, 1994:112/115).

The participatory paradigm conceives reality from an objective-subjective point of view since such a reality is co-created by the mind and the world (Heron & Reason, 1997:270-280, 289). In the participatory paradigm, the primary voice is informed by the process of reflection-in-action and reflection-on-action as well as by the presentation of creative productions. The secondary voice is more evident in the discussion of experiential and practical issues in the light of theoretical modalities (Heron & Reason, 1997:290).

4.4.2 Epistemology

Epistemology, as explained above, relates to the relationship between the knower/inquirer and that which is knowable. Therefore, it is essentially concerned with what knowledge is, what we know and how it is acquired. In accordance with their ontological assumptions, the positivists embark on objective investigations in order to ascertain how things really are or work. In other words, they assume a dualist objectivism. The post-positivists have modified the positivist position in that they believe it is possible to closely approximate reality, but never fully or perfectly apprehend it. As such, they assume a modified dualist / objective position. The central aim of the positivists' and post-positivists' enquiry is the explanation of phenomena in order to predict and control. This is essentially a reductionist and deterministic enquiry that positions the researcher in the role of the informed expert (Guba & Lincoln, 1994:113).

The critical theorists assume a transactional / subjective position since they believe that knowledge is experiential, theory-mediated and theory-dependent. The aim of enquiry in terms of critical theory is the critique and transformation of problematic and inhibiting societal structures and issues, such as those concerned with social, political, cultural, economic, and gender entities. Therefore, the notions of advocacy and activism are important, as the investigator is a facilitator who wishes to address the transformational requirements.

The constructivists assume a broader transactional / subjective position because they believe that knowledge is created by the interaction between the investigator and the person or phenomena being investigated (Guba & Lincoln, 1994:111). On the one hand, knowledge is considered as being external and absolute and, on the other, as being transactional and personal. For the constructivists, the aim of enquiry is an open and interpretive reconstruction of multiple realities in order to form a more sophisticated picture of reality as a whole. This is an on-going process in which advocacy and activism are also of importance and the inquirer is both participant and facilitator, often in combination with others (Guba & Lincoln, 1994:113).

Epistemologically, the participatory paradigm attains and articulates knowledge through the combination and interaction between experiential, propositional, presentational, and practical knowing (Heron, 1996:53; Heron & Reason, 1997:280–283, 289). The aim of the enquiry in the participatory sense is to explore the experiential and practical modalities of knowledge. These may then be communicated in propositional, explicit terms but the aim is a creative, exploratory, collaborative and open investigation that negotiates between, and combines, different forms of knowledge communication to yield a holistic, socially relevant interpretation (Heron & Reason, 1997:280).

4.4.3 Axiology

In terms of the axiological (value) dimension, positivism and post-positivism view instrumental understanding (predicting and controlling), and the use of propositional knowledge about the world, as fundamentally valuable. For the critical theorists and

constructivists, propositional knowing is valued because it informs and facilitates societal change and social emancipation based on the experience and position of the O/other in relation to the so-called self. In the participatory paradigm, the acknowledgement of the human experience and practical knowledge is valued as a means to allow humans to flourish. In this regard, knowledge, and its intrinsic value, is a negotiated settlement between autonomy, co-operation and cultural hierarchy (Heron & Reason, 1997:286-289).

4.4.4 Methodology

Methodologically speaking, the positivists focus on the verification of a predetermined hypothesis by means of inductive empirical investigation. In accordance with their modified ontological and epistemological beliefs, the post-positivists employ modified experimental / manipulative methodology that focuses on the falsification of such a hypothesis. The positivists and post-positivists accumulate knowledge rather like building blocks assembled on the factual foundations of existing verified facts or laws. These facts can be generalised and used to control and predict further knowledge acquisition.

Critical theorists use dialogic/dialectical critical methodology based upon or suggested by theory in order to reconstruct reality according to that specific theory. Knowledge accumulation by the critical theorist takes place by continually eroding ignorance and misapprehension through a dialectical process of historical revisionism. This is obviously theory and context related (Guba & Lincoln, 1994:112, 114; Heron & Reason, 1997:290).

The constructivists use hermeneutic / dialectical methodology to reconstruct previously held perceptions (Guba & Lincoln, 1994:111-112). They accumulate knowledge by re-evaluating and developing increasingly sophisticated constructions. According to Guba and Lincoln (1994:114), "One of the important mechanisms for transfer of knowledge from one setting to the other, is the provision of vicarious experiences, often supplied by case study reports."

The participatory paradigm is characterised by participatory action enquiry that is motivated by epistemic participation and political participation. In other words, it is grounded in experiential knowledge communicated by means of experiential and propositional knowledge and is often informed by the desire for political activism (Heron, 1996:21; Heron & Reason, 1997:283- 286, 289).

According to Heron and Reason (1997:290), for the participatory paradigm, knowledge acquisition and accumulation occurs in communities of enquiry embedded in communities of practice, which is similar to the concept of reflective practicums articulated by Schön (1987). This acquisition of knowledge occurs in a cyclical process and usually moves from experiential and presentational communicative formats, which are manifested as practical knowing, to more propositional forms of communication (Heron & Reason, 1997:283). Additionally, this correlates with the knowledge creation cycle advocated by Nonaka (1994; cf. Nonaka & Takeuchi, 1995; Nonaka & Konno, 1998; Nonaka *et al.*, 2000; Nonaka & Toyama, 2005; Nonaka *et al.*, 2006; Nonaka & Von Krogh, 2009). In this interpretive paradigm, contextual knowledge is regarded as “circular and amoeba like” (Lincoln, 84:1990), rather than as consecutive building blocks.

It is thus clear that there has been a significant philosophical shift in the apprehension of the nature of reality, the related acquisition of knowledge and the value implications thereof. The discussion presented above provides a broad overview of research and research paradigms, which indicates the philosophical passage from positivism to the participatory paradigm. Table 1 below offers an overview of the different paradigms as discussed above.

Table 1: Overview of research paradigms: Heron and Reason (1997:289)

Issue	Positivism	Post-positivism	Critical theory	Constructivism	Participatory
Ontology	Naïve realism- "real" reality but apprehensible	Critical realism – "real" reality but only imperfectly and probabilistically apprehensible	Historical realism – Virtual reality shaped by social, political, cultural, economic, ethic, and gender values crystallised over time	Relativism – local and specific constructed realities	Participative reality – subject-object reality, co-created by mind and given cosmos
Epistemology	Dualist / objectivist; findings true	Modifies dualist / objective critical tradition / community; findings probably true	Transactional / subjectivity; value mediated findings	Transactional / experience-based, subjective; created findings	Critical subjectivity in participatory transaction with cosmos; extended epistemology of experiential, propositional, and practical knowing; co-created findings
Methodology	Experimental/ manipulative; verification of hypotheses; chiefly quantitative methods	Modified experimental/ manipulative; critical multiplicity; falsification of hypotheses; may include qualitative methods	Dialogic/ dialectic	Hermeneutic/ dialectical	Political participation in collaborative action inquiry; primacy of the practical; use of language grounded in shared experiential context.

<p>Axiolog</p>	<p>Propositional knowing about the world is an end in itself, intrinsically valuable</p>	<p>Propositional, transactional knowing is instrumentally valuable as a means to social emancipation, which is an end in itself, is intrinsically valuable</p>	<p>Practical knowing how to flourish with balance of autonomy, cooperation, and hierarchy in culture is an end in itself, is intrinsically valuable</p>
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4.5 Conclusion

The aim of this Chapter was to identify an appropriate research paradigm capable of accommodating tacit knowledge, reflective practice and the management of multi-practitioner arts-related PLR projects. This is necessary, as a fundamental problem concerning PLR is a lack of paradigmatic awareness within which these research activities occurred. This aim was addressed, firstly, through a discussion of the generally acknowledged nature of research in the interest of identifying research criteria that are viewed as appropriate in the academic context. Secondly, an overview and discussion of the five most prominent research paradigms was presented in order to illustrate the fundamental differences between them, and identify the one that most suitably engages with and accommodates the three components of this chapter's aim.

In terms of the first discussion, research in the academic context is considered a systematic investigation conducted intentionally in order to gain new insight and knowledge. This knowledge should be original, and be accepted and verified by a specific peer group and the academic community at large. The operational execution of this research generally employs three methods that are important: quantitative, qualitative and co-operative enquiry. These research methods are not necessarily considered paradigm specific. However, quantitative research is generally paired with the positivist and post-positivist paradigms; qualitative is paired with the critical theory and constructivist paradigms and co-operative enquiry with the participatory paradigm. With this contextual information in mind, the second discussion ensued, wherein five research paradigms – positivism, post-positivism, critical theory, constructivism and the participatory paradigm – were elucidated.

This discussion, in essence, represents the developing ideation of knowledge from hard objective fact, to the inclusion of more subjective, personal insights that include the tacit dimension. The objective of the investigative process has consequently also shifted from the predictive and control imperative to an open and interpretive reconstruction of multiple realities, the purpose of which is to form a more sophisticated picture of this reality and promote advocacy and activism. In this context, knowledge is not

conceptualised as consecutive building blocks, but rather as a more fluid entity. While it is true that some forms of knowledge, such as the propositional dimension, are able to be effectively communicated in language/text, other knowledge forms (experiential, presentational, practical knowledge) require different communication mechanisms.

The primary point of criticism in this study, with regard to positivism, post-positivism and constructivism, is that they do not adequately acknowledge experiential knowledge. While it is acknowledged that critical theory embraces the notion of experiential knowledge, the participatory paradigm offers an extended epistemology that is more suited to the utilisation of the knowledge gained from the process of creative production and the resultant artefact. The participatory paradigm thus represents a fundamental departure when considering its experiential encounter with the world, in which knowledge is non-reductionist as opposed to the separation of body and mind. This corresponds with Polanyi's holistic conceptualisation of knowledge that rejects the positivist and post-positivist, depersonalised, objective notion of knowledge. Accordingly, the holistic conceptualisation of knowledge proposed by the participatory paradigm relates to the differentiating feature of Polanyi's work which, according to Tsoukas (2002:3-4), is intended to overcome the theory-practical, mind-body dichotomy.

Hence, experiential and tacit knowledge are recognised as important dimensions of the social and inter-subjective process. Consequently, it is concluded that tacit knowledge and reflective practice, with the related notions of indwelling, artistry and reflection-in-action, reflection-on-action and reflective practicums, may be accommodated in the participatory paradigm. Additionally, co-operative enquiry, which provides a structured methodological approach to co-operative research, is an integral part of this paradigm. This is important as both the multi-practitioner arts-related PLR projects dealt with in this study and the TOKC are collaborative activities. Consequently, the TOKC is considered a sophisticated form of co-operative enquiry that may be positioned in the participatory paradigm.

Of significance is that the ontology, epistemology and methodology of a specific paradigm determine the criteria for evaluating the research conducted within the auspices of this paradigm. In other words, PLR conducted within the participatory paradigm should not be evaluated according to criteria relevant to the post-positivist or critical theory paradigms. The fact that PLR is often conducted without a specific paradigmatic awareness is the reason confusion and conflict arise in the academic context, because researchers conducting PLR are often trying to justify their activities according to inappropriate research paradigms, which negates the value and purpose of the tacit knowledge foundation.

Therefore, in the context of this study, tacit knowledge, reflective practice and PLR can be included under the umbrella of the participatory paradigm. In the next chapter, PLR and its positioning and functioning within the academic context are explored in more detail.

CHAPTER FIVE: RESEARCH IN THE CREATIVE DISCIPLINES: DETERMINING THE CHARACTERISTICS OF PRACTICE-LED RESEARCH**5.1 Introduction**

As stated in the previous chapter, the paradigm in which a researcher functions determines what type of knowledge is deemed relevant and what governs how this knowledge is accessed and communicated. Therefore, in the light of the research paradigms discussed, the purpose of this chapter is to determine the characteristics of practice-led research (PLR) and to establish a negotiated position within the university (academic) research context. I concur with Biggs & Büchler (2008:7) and cf. Solleveld (2012) when they state that due to the serendipitous and pluralistic nature of PLR it is impossible to give a precise definition of this area of practice. Accordingly, a more realistic objective would be to establish what derivations and characteristics of PLR are acceptable in the said academic context.

This involves a further investigation of the participatory paradigm as a possible appropriate and compatible research paradigm for PLR. The positioning of PLR within a research paradigm is of significance as I contend that the reason why PLR is often considered problematic is that a paradigmatic position has not been established. As a result it is often evaluated by means of an inappropriate paradigm (cf. Gray & Malins, 2004:20). Furthermore, it is important to understand the paradigmatic position of PLR in the academic context before discussing its compatibility with the theory of organisational knowledge creation (TOKC).

With this in mind, this chapter is informed by the following aims:

- 1) To establish a contextual and historical background for research developments in the creative disciplines in order to highlight problematic issues. This includes a discussion and clarification of the myriad terms used to describe this type of research,
- 2) To investigate the positioning of PLR within the academic research context and the compatibility of PLR with the participatory paradigm.

5.2 The historical developments of research in the creative disciplines

This section firstly addresses international developments of research in the creative disciplines, after which a more local perspective is offered. The reason for this is that, as intimated, South Africa lags approximately twelve years behind international educational reform.

The introduction and development of research in the creative disciplines in the university context was not a gradual process as was the case in the natural sciences. In contrast, the materialisation and development of research in the creative disciplines is interrelated with and symptomatic of recent reforms that have taken place in higher education since the 1990's and beyond (Kälvemark, 2011; also cf. Scrivener, 2002; Sullivan, 2009; Biggs & Büchler, 2007).

The United Kingdom was one of the first countries that initiated these reforms and since then has played a pioneering role in the development of research in the creative disciplines (Biggs & Büchler, 2008:7). As stated in Chapter one, these educational reforms were not a uniform occurrence and were informed by political initiatives and the need for innovative research expressed by the growing creative industries. The United Kingdom's *Further and Higher Education Act* (1992), converted polytechnics to universities in order to align higher education and create a single funding body. Previous to this development, as mentioned earlier, Art and Design institutions were situated in polytechnics that focused on providing practical, professional and vocational training. Consequently, the creative disciplines situated within the polytechnics had done little to develop an academic research tradition (Brown *et al.*, 2004:1-2). As a result, staff members in the creative disciplines at polytechnics produced creative outputs aimed at engaging with and remaining relevant to their respective professional disciplines (Niedderer & Roworth-Stokes, 2007:5). Accordingly, there was very little development of accredited written research in these institutions.

Therefore, the educational reforms in the United Kingdom afforded Art and Design institutions the opportunity to compete for research funding. However, the existing research funding system prioritised explicit research outputs and had not been

required to contend with or accommodate creative outputs. In this situation creative practitioners tried to develop an academic language that allowed participation, which suited the institutional funding requirements (Brown *et al.*, 2004:1-2). However, it soon became evident that there was a systemic problem and that the adaptation of language and terminology would not create a situation that allowed for the participation of the creative disciplines.

Biggs and Büchler (2011:83) argue that these educational reforms were tantamount to a forced integration of the creative disciplines into an institutional setting which was geared towards textual accredited research outputs. Creative practitioners were expected to adopt and adapt to a system that prioritised propositional and explicit knowledge associated with, for instance, the post-positivist, critical theory and constructivist paradigms, which did not take the inherent values and cultural practice of creative practitioners into account. No procedures or policies were in place that addressed the issue of the artefact as a knowledge communication modality, which itself contributes to research. In this context, practitioners were not willing to abandon the creative production that is so pivotal to their disciplines and undermine these activities by producing purely textual research outputs that prioritise propositional knowledge in order to adhere to academic criteria. This is because they express themselves most successfully in terms of creative practice, so purely written outputs are viewed as inadequate. The strength and fascination of the creative disciplines is that they are by their very nature based upon a more nuanced symbolism and the ambiguity of visual language (Combrink & Marley, 2009:179,181; also cf. Gray & Malins, 2004:40).

An additional problematic issue concerning the development of research criteria in the creative disciplines in the United Kingdom was, and still is, that these disciplines consisted of a multitude of sub disciplines, which are accommodated in various institutional settings. These creative disciplines deliver different creative outputs, which make it difficult and even detrimental to develop a uniform approach to research. In the 2001 *Research Assessment Exercise* conducted in the United Kingdom, fourteen major creative disciplines (with a multitude of sub-disciplines) were identified. These included the Performing Arts, Fine Arts and the Design disciplines (Brown *et al.*, 2004).

As indicated by several theorists, such as Borgdorff (2011), Biggs and Büchler (2007) and Rust *et al.* (2007), the problem at the heart of the debate is the inclusion of creative practice as a fundamental component that contributes to research in the academic (university) context. The question that has to be answered, is how can artistic practice be incorporated into the academic research domain in such a way that it caters for and contributes to the specific needs of the creative practitioner? (cf. also Sullivan, 2006; Biggs & Büchler, 2011). Interrelated with this is the notion of the role of the artefact in knowledge communication.

Early debates were concerned with whether the creative disciplines should engage with the research context at all. More recently, the debates have shifted from an ontological question to a methodological one: investigating how art should engage within the academic research context (Marley & Combrink, 2009:181; Farber & Mäkelä, 2010; Doman & Laurie, 2010; Borgdorff, 2011; Munro, 2011). In this context, the point of departure was, and still is, the way in which PLR engages, relates to and fulfils standard research criteria. These research criteria are primarily those discussed in Chapter four: (i) A systematic investigation; (ii) conducted intentionally; (iii) to acquire new knowledge; (iv) about a subject: (Scrivener, 2009:70). In addition, the notions of rigour, reliability, relevance and communicability of research are further points of discussion.

Consequently, the problem still facing creative practitioners within the academic context is the reconceptualisation of standard criteria within the framework of creative practice (Brown, 2000; Sullivan, 2006:26). As mentioned in Chapter four, it is my contention that the issue of methodology and research criteria should be addressed on a more fundamentally paradigmatic level. In other words, what research paradigm is suited to PLR and how does this relate to conventional research criteria? This issue is discussed in more detail in a subsequent section.

Therefore, the educational reforms in the United Kingdom were a catalyst that initiated an engagement with the above-mentioned issues concerning research in the creative disciplines. The United Kingdom *Arts and Humanities Research Council* (AHRC) which also processes such matters as the Research Assessment Exercises, has investigated this area of practice and has produced several documents including

the *Research Review Practice-led Research in Art, Design and Architecture Report* (Rust *et al.*, 2007). This document provides a broad contextual background to PLR research in Art, Design and Architecture, and discusses the scope and quality of research within these disciplines. It also identified good practices such as the growth and diversity of collaborative practice within PLR and addressed contentious issues such as the lack of coherent publishing infrastructure, limited research and supervisory capacity and the confusion concerning the role of the artefact as a knowledge communication modality (Rust *et al.*, 2007:66-68). These research review processes created awareness of research within the creative disciplines and are promoting the legitimacy of such studies.

One of the fundamental decisions made by research bodies in the United Kingdom is that practice needs to be adequately contextualised to function in the academic context and cannot stand alone as a research output or contribution to knowledge. The United Kingdom AHRC *Research Funding Guide* accepts the notion of creative outputs and defines the role of practice as follows:

Creative output can be produced, or practice undertaken, as an integral part of a research process...The Council would expect, however, this practice to be accompanied by some form of documentation of the research process, as well as some form of textual analysis or explanation to support its position and to demonstrate critical reflection...Work that results purely from the creative or professional development of an artist, however distinguished, is unlikely to fulfil the requirements of research (AHRC, 2006:25).

Conceivably, the documentation of research referred to above, is viewed as a means to counteract the ambiguity of interpretation inherent in creative production. The purpose of this documentation is thus to direct and contextualise the assessment process. The notion of contextualising creative practice by means of a written document has been generally accepted in the academic context. However, the persistently problematic issue (addressed later in this chapter) is the relationship between text and practice and their distinct contributions, purposes and functions within academic research.

It is thus clear from the quote above that in the United Kingdom a distinction is made between artistic practices that function in the professional context of galleries, theatre

(isolationist position) and artistic research that functions in the academic context (situated position). Artistic practice functions have an impact in the artistic practice domain while research in creative practice functions in and influences both domains. Borgdorff (2011:44) states that in the enterprise of academic artistic research, art transcends its limits in order to contribute to and amend the notion of research, while academia allows the understanding and thinking that are inherent in artistic research. I concur with this, as the intent of research in the creative disciplines within the academic context is to expand the knowledge base of the disciplines and contribute original artworks or arts processes that uncover new facts, relationships and reveal cognitive understanding and insight.

Higher education reforms and the development of research in the creative disciplines were not only evident in the United Kingdom scenario. Other countries influential in this regard are Australia, Finland and Sweden (Rust, *et al.*, 2007:14; Biggs & Büchler, 2007:63). Research in the creative disciplines benefited from the unification of Europe, which began in 1986 with the signing of the Single European Act²² and the subsequent initiatives, such as the *Bologna process*²³, the aim of which was to standardise education since 1999.

Although lagging behind international trends, educational reforms in South Africa have followed patterns similar to those in the United Kingdom (Ensor, 2003). However, although influenced by international trends, the major driving force of post 1994 educational reform in South Africa was to try and remedy the inequalities implemented by the apartheid regime of the previous government (Sedgwick, 2004). In terms of higher education, one of the methods to achieve this goal was to merge institutions. As a result between 2004 and 2005, 36 institutions (universities and

²² The Single European Act was signed at Luxembourg on 17 February 1986, and The Hague on 28 February 1986. The aim of this act was to establishing a single market and codified political cooperation.

²³ The aim of the Bologna Process (1999-2009) was to create a system for the European higher education system in which higher education degrees are compatible, allowing cooperation and exchange between institutions, students and staff. <http://www.ond.vlaanderen.be/hogeronderwijs/bologna/about/>

technikons²⁴) were merged to create 22 "new" universities. In some cases technikons were converted into universities of technology. While in others, technikons and traditional universities were merged. The Technikon Witwatersrand and the previous Rand Afrikaans University became a comprehensive university known as the University of Johannesburg. In other cases, traditional universities merged with each other. North-West University was established by merging the (previous) Potchefstroom University for Christian Higher Education and the University of the North-West in Mafikeng. Currently North-West University has various campuses situated respectively in Potchefstroom, Mafikeng and Vanderbijlpark.

Similar to the United Kingdom's polytechnics, technikons in South Africa were non-university higher education institutions that focused on career and vocational education. According to the *Committee of Technikon Principals*, these institutions established close ties with industry and offered structured courses with practical applications, which were workplace related (CTP, 2001).

As the majority of arts and design education was situated within technikons, these educational reforms have also exerted an influence on the current South African developments concerning research in the creative disciplines. However, due to this late integration, research in the creative disciplines in South Africa is a younger and less developed research area (Farber & Mäkelä, 2010:8). Presently, the Department of Higher Education and Training only allocates subsidies to articles published in accredited journals on the South African Post-Secondary Education list. Additionally, accredited conference proceedings and books are also eligible for subsidies. In other words, this current system only grants subsidies to accredited textual outputs (Schmahmann, 2011:29). Consequently, in the South African context, there is a wide range of activities being conducted within the creative disciplines, which are excluded from subsidy allocation, and creative practice in the South African higher educational context is neither awarded a subsidy nor recognised as research by the government. The post 2005 integration thus facilitated the same process of engaging and

²⁴ The United Kingdom equivalents of technikons were polytechnics, which were converted to independent universities after 1992.

negotiating with the more established academic research context and criteria, as was the case internationally.

Nevertheless, some progress has been made in this regard. According to Van Zyl (2010:118), the first workshop held to discuss research in the creative disciplines was the *Creative Outputs Workshop* hosted by the University of Stellenbosch in 2007. This workshop was instrumental in engaging in dialogue with the Department of Higher Education and Training (DHET), which acknowledged the need to recognise creative outputs. A working group was established in November 2009 that consisted of eighteen senior academics and experts functioning within the creative disciplines at South African universities (Schmahmann, 2011:29). The purpose of the group was to create an evaluation framework that clarifies evaluation criteria and processes to accredit creative outputs.

Although Schmahmann (2011) supports the notion of pure creative production as accredited output without any textual exegesis, the final report submitted to the DHET (2012) recognises that a more holistic and non-reductionist knowledge construction is necessary in order to evaluate work. According to this report (2012:12), all submissions must be accompanied by a written document by the artist that contextualises the work. This is more in line with international thinking (AHRC, 2006:7-8) in terms of contextualising creative production. The function of this contextualisation is to provide background and information that cannot be ascertained from an examination of the practical work / artefact submitted. One could conclude that this refers to such aspects as the self-reflective process of making as well as the contextual and theoretical dimension that is not evident from viewing the work in isolation.

The working group has devised a two-stage process: In the first stage, a specialist possessing discipline-related knowledge must assess whether the creative output is a contribution to knowledge or an enhancement of the field (DHET, 2012:6). In the second phase, the creative output is rated according to a five-tier scale system (one is the lowest unit and five the highest) that relates to the specific disciplines criteria. For example, a single work in a group exhibition would receive a lower rating than a solo exhibition, while an exhibition that "...can be demonstrated to have involved the

artist in a significant number of lectures, colloquia or other engagements of a scholarly nature...” (Schmahmann, 2011:34) could receive the highest rating. It may thus be concluded that in order for creative production to be accredited, it needs to be clearly contextualised and that the more holistic this contextualisation, the higher the recognition or allocation will be. The envisioned implementation date for this accreditation system was the beginning of 2014. However, at the time of writing, the DHET has not given any response regarding this process.

Another noteworthy development in South Africa, that is also in line with international trends (Rust *et al.*, 2007:5), is the development and execution of collaborative interdisciplinary research projects within the creative disciplines. The *Tracking Creative Creatures* (TCC) (2007-2009) project and *Transgressions and Boundaries of the Page* (TBP) (2009-2012) projects, conducted in the then emergent Research Niche (entitled *Visual narratives and creative outputs through interdisciplinary and practice-led research*) and discussed in Chapter two, are examples of this type of collaborative project. Both of these projects, as noted, culminated in a peer-reviewed collection of articles, which are included in accredited, special editions of *Literator* (2009:1[30]) and *Literator* (2012:1[33])²⁵.

An additional, significant national event in the South African context was the *On making: Integrating approaches to practice-led research in Art and Design* colloquium, organised and hosted by the University of Johannesburg and held in October 2009. The framing premise of this colloquium was that the production of appropriately contextualised creative work is central to academic research. This two-day colloquium included both national and international speakers whose papers are included in a peer-reviewed publication, *On Making: integrating approaches to PLR in art and design* (Farber, 2010).

This publication, which includes a broad spectrum of contributions and perspectives, is arguably the most significant collection of articles, concerning research in the creative disciplines, produced in South Africa to date. The article by Farber and

²⁵ A DVD containing audiovisual material of the related exhibitions was included in both of the print editions of the above-mentioned *Literators*. This was done in order to showcase the artefacts, which was the beginning of the knowledge creation process.

Mäkelä (2010:7-16) identifies key arguments and issues that arose from the colloquium and contextualises them in terms of international issues. They identify three research trends indicative of international thinking (cf. Mäkelä *et al.*, 2011:7-8), which are also related to the isolationist and situated positions mentioned in Chapter one.

The first trend advocates that creative production can stand alone within the academic context and is equivalent to scientific research. In this context, the epistemological gain is made manifest and informed by the reader and no explanation is necessary (Farber & Mäkelä, 2010:16). The articles by Hay (2010) and Olivier (2010) included in this publication are indicative of this stance, since they argue for the artwork as research. They distance the creative production from the conventions and criteria of conventional research. Therefore, Hay and Olivier subscribe to the isolationist position, which has its origins in Frayling's (1993) notion of *art as research* and correlates with the notion of performative research conceptualised by Haseman (2006) and Bolt (2008) that will be discussed in a subsequent section.

The second trend is what Farber and Mäkelä (2010:16) refer to as academically attuned PLR, which requires that a textual exegesis be presented parallel to the creative production. In this context, the traditional research conventions are adopted and the artist must answer central research questions accompanied by the related aims and objectives as well as follow a defined methodology. Farber's presentation at the colloquium on her *Dis-location / Re-location* project may be considered an example of academically attuned PLR. This project comprised of a travelling exhibition that consisted of photography, sculpture, installation, performance, video and sound art. Additionally, this project was explicated in journal articles, conference presentations and a published book. The exhibition and subsequent writing explores the ambivalent position of Farber, a second-generation English speaking Jewish female, living in post-apartheid South Africa, in relation to Bertha Marks, a Victorian English speaking woman who immigrated to South Africa in order to enter into an arranged marriage in 1885. The creative productions and related textual outputs are framed within the theoretical discourses of post-colonialism and whiteness studies (Farber, 2009; cf. Swanepoel & Goosen, 2012).

The third trend is a negotiated position between the previous two trends in which practitioners wish to challenge the dominant logic and initiate a broader understanding of research (Farber & Mäkelä, 2010:16). Alternative strategies in which the artefact and related production is central to the research is advocated. In this context, writing supports, contextualises and elucidates the creation process, research is created through the art-making process and conventional rules are adapted. For example, the conventional academic writing style may take on a more creative poetic or essayistic structure. In this context, practitioners challenge institutional processes and are required to present alternative avenues and / or criteria in order to substantiate their productions as research (cf. Mäkelä *et al.*, 2011:7-8). In terms of the colloquium and subsequent publication, Doman and Laurie (2010) present a research model that negotiates between the institutional requirements while taking the serendipitous nature of PLR into account. The model presented is similar to the one conceptualised by Scrivener and Chapman (2004) discussed in relation to methodological issues.

Each of the above-mentioned trends contains problematic dimensions. The first trend, which positions the artefact as research without any further explanation, is too ambiguous and uncontextualised. The creative production is difficult to evaluate, and the evaluation process is reliant on the knowledge of the reader so that the artist is negated in the process.

Academically attuned research, which is the second trend, runs the danger of becoming a slave to established research conventions and falling prey to research paradigms that emphasise textual explicit knowledge. If theory and practice are not carefully balanced, theory becomes the driver of practice. In other words, research criteria, if not utilised to assist practice, can deform and misdirect the potential of creative practice in favour of the textual theoretical reading thereof.

The third trend, which I believe is the most appropriate approach, requires an astute understanding of conventional research criteria and the appropriate research paradigm. In other words, researchers need to establish a paradigmatic point of departure, which does not negate the tacit nature of knowledge.

In the light of the above, the aim of this section is to provide a contextual/historical background to the developments of PLR in order to highlight problematic issues. The following conclusions may be drawn: research in the creative disciplines has been introduced into the academic milieu in a number of different countries and contexts since the 1990's and is becoming an increasingly formalised and recognised area of research; due to the nature of research in the creative disciplines, the formalisation of it is not likely to lead to a prescriptive methodological approach.

However, similar patterns of practice regarding research in the creative disciplines that are located in the situated position are emerging both nationally and internationally. Firstly, creative practitioners view creative practice as central to their research activities. Therefore, it is impossible to negate such practice in exchange for purely textual research. Secondly, creative practice needs to be contextualised within the academic context in order for its reading and evaluation to be guided by some form of textual document. Thirdly, and in line with the first two points, research in the creative disciplines needs to find a negotiated position that promotes both creative practice and the institutional research context.

Therefore, it is important to discuss the terms and emergent research trends in order to contextualise the discussion of the negotiated position.

5.3 Research terminology in the creative disciplines

Due to the way in which the creative disciplines were introduced into the academic research context, there is still much discussion and disagreement surrounding the terms and definitions used to describe this area of research (Durling & Niedderer 2007:2; Sullivan, 2006:20; Biggs & Büchler, 2008:5; Biggs & Büchler, 2011: 82; Solleveld, 2012). According to Biggs and Büchler (2011), and as is evident from the literature reviewed, the creative disciplines have not as yet developed a coherent research community employing clearly defined terminology and methodologies that result from a progressive accumulation of knowledge. This is in part because research in the creative disciplines is a relatively young endeavour, which was introduced into a multitude of academic settings. Consequently, there are different opinions concerning the nature of PLR and the role of the artefact within the institutional research context.

As mentioned, the basic difficulty is that traditional academic research has developed criteria, which focus on explicit textual outputs that do not have to take creative practice and the related notion of tacit knowledge into account. The introduction of the creative disciplines into the traditional research context thus poses a dilemma because creative practitioners consider practice as central to their research activities. Therefore, the need to clarify the role of the artefact within the research has engendered much debate. Symptomatic of this is the disparity of terms used to describe research in this area of practice. This situation does not seem to be improving, as indicated by Biggs and Büchler in their comment:

Finding a good name to describe the field has proven to be difficult, and the list of names used by others is very long. For example, terms like 'artistic research' are rejected by the design community; 'creative research' suggests that other research is not creative; 'practice-based' does not clarify what kind of practice, e.g. arts, education, healthcare, nor does the term clarify how practice leading to research outcomes differs from practices leading to professional outcomes (Biggs & Büchler, 2011:82).

Subsequent to Frayling's (1993:5) categorisation of research in the creative disciplines as discussed in Chapter one – research for art, research into art and research through art – a multitude of terms to describe research activities in the creative disciplines has arisen. According to a survey conducted by Niedderer and Roworth-Stokes (2007:6), terms such as design-based research, arts-based research, practice-based research, critical inquiry, reflective practice and evidence-based practice, are the most commonly used terms. Additionally, practice-led research, practice-centred research and studio-based research, are also prevalent.

Niedderer and Roworth-Stokes (2007:7) further conclude that terms such as arts-based research, practice-based research, practice-led research, practice-centred research and studio-based research are often used synonymously or interchangeably (cf. also Olivier, 2010:85; Farber & Mäkelä, 2010:9; Durling & Niedderer, 2007:3; Sullivan, 2006:20).

Niedderer and Roworth-Stokes (2007), in their review of the terminology, have identified three categories containing related terms within research in the creative disciplines.

1. Critical inquiry or investigative practice;
2. Practice by reflection and/or research: reflective practice, evidence based practice, research informed practice, research led-practice;
3. Research involving practice: practice-based research, studio-based research, practice-centred research, practice-led research, arts-based research, design-based research.

Critical inquiry or investigative practice²⁶, which corresponds with Frayling's (1993:5) notion of research into art, is viewed as a systematic investigation of the creative production from an objective outsider perspective (Niedderer and Roworth-Stokes, 2007:10) or what Borgdorff (2011:48) refers to as a theoretical distance. This is the type of research normally undertaken in the humanities in which a range of critical theories are used as frameworks to interpret works of art or creative production. As such, critical enquiry uses a range of dialogical/dialectical methodologies in order to reconstruct reality according to specific theory (Guba & Lincoln, 1994:111-112). Therefore, the terms critical inquiry or investigative practice refer to the interpretation or reading of the artefact situated within a transactional / subjective, value-mediated epistemology focusing on propositional knowledge situated in the critical theory paradigm (Chapter four). This research approach does not consider the personal tacit and self-reflective dimension and is not appropriate for research in the creative disciplines that consider practice as a knowledge communication modality.

Practice by reflection, and the terms listed under this category, gain new insight by means of purposeful creative practice inquiries. In this context, reflection is used to understand the dynamic nature of practice as a post rationalisation thereof. However, according to Niedderer and Roworth-Stokes (2007:6), the terms investigative

3 Critical inquiry or investigative practice (Niedderer & Roworth-Stokes, 2007:10) and research into art (Frayling, 1993:5) represent corresponding concepts. However they should not be confused with the notion of research as critical practice as used by Douglas *et al.* (2000:3) which refers to the work produced by contemporary artists who produce work that is embedded in and informed by a body of critical theory.

practice, research-informed practice and research-led practice seem to have little relevance in art and design and are mainly used in professional and educational contexts, including health, education and organisational development.

In research involving practice, the research process is fundamentally rooted in practice and the investigation is framed with the intent of enhancing practice. This is indicative of what Frayling (1993:5) refers to as research through art. In this sense, practice informs theory and theory building in order to gain new insight, according to Niedderer and Roworth-Stokes (2007:10). The third trend identified by Farber and Mäkelä, (2010:16), as elucidated in section 5.2, is related to and indicative of this research approach.

When framed within the academic context, research involving practice (Niedderer & Roworth-Stokes, 2007:10) and research through art (Frayling, 1993:5), correspond with the notion of formal research discussed by Douglas *et al.* (2000:3) and fall within the situated position (Biggs & Büchler, 2008:6). Concomitantly, the notion of challenging traditional research conventions and the dominant logic, in order to develop criteria that accommodate the tacit nature of knowledge and the explication thereof, is integral in this context.

Research through art is the most appropriate category in terms of this research because of a non-reductionist approach and the holistic representation of knowledge. In other words, it is the utilisation of both the tacit and explicit dimension inherent in this category that is appropriate for the academic context. As evident from the literature reviewed, the most commonly used terms, albeit used interchangeably in the South African context²⁷, are practice-led research and practice-based research (Van Zyl, 2010:120).

²⁷ While the identification and classification of terms by Frayling, (1993), Niedderer and Roworth-Stokes (2007) is useful to gain a broad overview this is not to say that there is a generic understanding and use of these terms by other authors in the field.

Accordingly, PLR is the preferred term in the context of this study. It refers to research conducted by creative practitioners in the academic (university) arena which, focuses on issues and concerns that are explored by practice. This is an exploratory journey with a variety of investigative possibilities. Exploration is understood and explained by means of reflective practice. In this context, both tacit and explicit knowledge are utilised to present a holistic picture of the issue at hand. There is thus a reflection and explication of both practical and theoretical issues. As each investigation is unique, the mode of exploration is context dependent and is often multimodal. Additionally, collaborative practice within PLR promotes and results in various modalities of knowledge sharing and creation. The participatory paradigm is viewed as central to presenting, understanding and explicating practice as research.

Therefore, PLR is used when referring to research within the creative disciplines positioned in the academic context. Additionally, the phrase *research in the creative disciplines* is used as a more generic term to include a variety of research that may not necessarily be contextualised or accepted in the academic context. However, it should be noted that in collaborative projects such as the TBP project, there is often a co-operative interchange between research for art, critical inquiry and PLR (Marley, 2012). Therefore, in the context of multi-practitioner arts-related PLR projects, allowances should be made for diverse approaches to research that could enhance each other and more fully explicate the theme of the project. Chapter eight addresses the issue that this type of accommodating space could result in collaborative interaction between practitioners and theorists.

As mentioned, the terms used to describe research in the creative disciplines, as discussed above, are indicative of the conceptualisation of research and the related role of the artefact in this regard. The next section further elucidates the conceptualisation of PLR research in the academic context.

5.4 Research in the creative disciplines: Emergent trends

The aim of this section is to clarify the notion of research in the creative disciplines within the academic context and determine a position among the different schools of thought. This section is divided into two parts. Part One discusses the isolationist

position and includes the notion of performative research, as advocated by Haseman (2006) and Bolt (2008). Part Two addresses the situated position of PLR within the academic context. Firstly, the notion of communities of dissatisfaction as conceptualised by Biggs and Büchler (2011) is discussed in order to highlight problematic issues. Thereafter, the research criteria, presented in Chapter three, as identified by Scrivener (2009:71) are used as a guide to structure subsequent discussions.

Establishing a position for research in the creative disciplines is not an easy task as creative practitioners are primarily concerned with the production of artefacts that are displayed in various contexts such as galleries, theatres and museums. The creation of knowledge is made manifest through art making and developed by means of reflection-in-action and reflection-on-action. The knowledge context and, thus, content, is most often not explicated and multiple readings of creative outputs are possible (Niedderer, 2009:1). In contrast, academic research is concerned with the production of new knowledge that conforms to specific research criteria and is understood as a systematic investigation addressing a specific research question or questions, the results of which are often generalisable and communicated in textual form (Niedderer, 2009:1; cf. Munro, 2011:160). PLR in the academic context is a research approach that brings together the artistic and academic communities (Borgdorff, 2011:44; Sullivan, 2006:20). However, according to Biggs and Büchler (2011:83), these two communities are incompatible because art, by its nature, is not concerned with, and eludes an explicit propositional reading.

As mentioned, two schools of thought exist regarding the positioning of research in the creative disciplines and in the academic context. Concomitantly, the use of creative practice as a means to communicate and disseminate research is inextricably linked to both of these two schools of thought. Creative practice as a valuable source of knowledge has been widely accepted by researchers conducting PLR. However, the position and communication modalities of creative practice are still a contentious issue.

The first school of thought advocates a completely new research approach in which

the artefact is recognised as a valid form of research without the requirement of textual exegesis. This school of thought, as theorised by Haseman (2006) and Bolt (2008), includes the notion of performative research. For them, performative research exists outside of existing research criteria, the bulk of which are deemed inappropriate for creative practice. This effectively positions performative research in what Biggs and Büchler (2008:6)²⁸, refer to as the isolationist position. According to Munro (2011:157), the premise, which underlies this thinking, is that creative production is indicative of a coherent, conceptual and critical process, which may be considered equivalent to research outputs. In the South African context, the first trend identified by Farber and Mäkelä (2010:16), and promoted by Olivier (2010), is indicative of this line of reasoning.

Those who wish to find a negotiated position within the existing research context support the second school of thought. Consequently, there is recognition that research in the creative disciplines must engage with traditional research criteria and establish a relationship of equivalence. Biggs and Büchler (2008:6) refer to research in the creative disciplines as occupying a situated position when it operates under the same equal conditions as traditional research and is evaluated according to the same criteria. However, in the context of this study the term, situated position is used in the context of “equivalence” and not “as equal to”. In this case, the artefact is viewed as central to the research process. However, it is the combination of the artefact (tacit knowledge dimensions) and the textual exegesis (explicit) dimensions that delivers epistemological gain (cf. Mäkelä & Routarinne, 2006; Durling & Niedderer, 2007; Biggs & Büchler, 2008; Borgdorff, 2011; Munro, 2011). One of the reasons for adopting the situated position in a comparatively competitive academic environment is that creative practitioners need to be able to discuss their contributions in terms of relevance and equivalence within existing research structures.

Research in the creative disciplines could be considered as a spectrum of activities,

²⁸ It should be noted that in the context of this study I am in accord with the earlier thinking of Biggs and Büchler (2007; 2008), which strongly advocates that PLR (they use the term practice-based research) is a sub-category of academic research within which it must negotiate its position and not a new paradigm. Hence, PLR should not be set apart from traditional concepts of academic research but rather needs to be rearticulated and reconceptualised in order to make a meaningful contribution as research (Biggs & Büchler, 2007:64).

with creative production on the one side, and purely textual explication on the other. In this sense, the intermediate zone represents and accommodates various combinations of tacit knowledge (as presented by the artefact) and textual explication (Mäkelä & Routarinne, 2006; Durling & Niedderer, 2007; Biggs & Büchler, 2008; Borgdorff, 2011; Scrivener, 2009; Munro, 2011).

I argue that PLR will find a place, albeit a nomadic one, in this intermediate zone (situated position). In this context, art will transcend its limits by articulating and explicating artistic practice in a number of communication modalities that enable it to contribute to the academic context. Additionally, academia will broaden its boundaries by accommodating different forms of knowledge and practice-led methodologies. In other words, creative practice and academic criteria are united in a research approach, thereby contributing to and enriching both disciplines (Borgdorff, 2011:44 cf. Munro, 2011). In the said intermediate zone, PLR should be situated within the academic context, but not restricted by a narrowed and unaccommodating conceptualisation of research. Therefore, PLR needs to maintain a link to traditional research, but reframe aspects of the latter to preserve the specificity of creative practice (Sullivan, 2006:26). In order to substantiate this line of reasoning, the isolationist and situated positions are discussed in more detail in the next section.

5.4.1 Practice-led research: the isolationist position

As mentioned in Chapter one, Haseman's (2006) notion of performative research represents the end of the spectrum on which pure practice, or embodied research, without formal written accompaniments, is considered research. He views qualitative and quantitative research as paradigms and calls for a new research paradigm, namely performative research²⁹. The latter differs from qualitative and quantitative research in that it focuses on the performance as the embodiment of knowledge.

Quantitative research, according to Haseman (2006:1-2), is the type of research that is based on a scientific empirical method with an inductive approach, when verifying a hypothesis as true or false. This type of research is quantitative in nature; results

²⁹ It should be noted that in the context of this study paradigms are considered to be overarching theoretical frameworks such as those discussed in Chapter four. Therefore, in this sense I differ from Haseman (2006) and consider qualitative and quantitative research (and by implication performative research) as research methods or methodological approaches and not paradigms.

are expressed by statistics, questionnaires, graphs or formulas. This research and the results thereof would typically fit into the positivist or post-positivist research paradigms. On the other hand, qualitative research encompasses a wide range of theoretical methods based on social enquiry with the aim of understanding the human action and experience. This is a more deductive and subjective approach and is usually expressed in words rather than numerical data (Haseman, 2006:1-6). This type of research would characteristically fall within the critical theory or constructivist paradigms. However, although these research methods have differing ontological and epistemic foundations, they rely on textual means to explicate knowledge. Haseman (2006:3; cf. Schön, 1983:149-150) concludes, and I agree, that mainstream quantitative and qualitative researchers have developed a range of observational and interpretative methods in which practice is an object of study, not a research method. In other words, although these research methods may have an experiential point of departure they do not involve the creation of artefacts as research methods and explorations of concepts.

However, the introduction of the creative disciplines, with the related strategies of reflective practice, into the academic research context, relates to what Denzin and Lincoln (2003:7) refer to as the performance turn in qualitative research. In this context, performance is a method of gaining access to knowledge and a means of deconstructing and analysing social and cultural phenomena. Performative research that is presented as an alternative to quantitative and qualitative research, taps into the conceptualisation of the performance turn. Therefore, research of this nature is presented in experiential terms such as a theatre production, dance performance, or exhibition and utilises an array of media such as image, music, moving image and digital code or a combination of these.

According to Haseman (2006), the notion of the performative act replaces the text, which is viewed as restrictive and not appropriate to communicate the experiential encounters. In this sense, he considers the performative act as a text in its own right. The origin of Haseman's thinking is derived from the concept of "performativity," introduced by Austin during a 1955 Harvard lecture series entitled *How to do things in words* (Bolt, 2008). The fundamental insight presented by Austin is that certain

speech utterances or productions do more than describing or providing information or knowledge about the world.

Austin (*in* Bolt, 2008) distinguishes between constative utterances and performative utterances. Constative utterances are descriptive; describing the world or an aspect thereof and, in the process, establishing links between the words and the object of description. Performative utterances enact real consequences in the world. In this context, words evoke a causal link and generate consequences. Accordingly, certain utterances and productions constitute a transformative power that changes aspects of the world. For example, when a judge declares someone guilty this reality is not only summoned but also concurrently real (Bolt, 2008).

Bolt (2008) and Haseman (2006) used the term performative research, with reference to Austin's original conceptualisation, to describe a specific transformative experience and contexts. Bolt (2008) discusses as an example a work by Mike Parr (born 1945) an Australian born performance artist who frequently depicts acts of self-mutilation or extreme physical feats during his performance. In one such performance, entitled *Cathartic action: social gestus number 5* (1977), Parr seemingly severed his left arm. This act left the audience in a state of shock, which provided the foundation of the transformative act:

In such extreme performance work, the artist is not enacting the 'as if' of theatre, s/he is not expressing some inner self nor is s/he producing a representation of anything in the world. In these performances the artist is working at the threshold of human experience and the performances are actions in themselves that produce effects in the world. They are performative (Bolt, 2008).

It would thus seem that for these authors, performative research functions on a more experiential level and expects the artistic production to have a transformative effect on the audience. Bolt (2008) warns against the uncritical use of the term performativity and confusing it with the notion of performance. Just because artists are involved in the making of, or performance of artistic endeavours, this does not mean they are engaged in performative research.

However, engendering transformation is only one of the many functions of art. In my

opinion, performativity in this sense cannot be assumed to be a general characteristic of research in the creative disciplines, because not all encounters with artistic practice are, or are intended to be, of a transformative nature. Additionally, often the transformative catalyst (the creative production) is reliant on the personal experiences of the viewer, which are capricious. In terms of evaluating this research paradigm Haseman (2006:7) proposes what he calls artistic audits. This process of evaluating a creative production is described as follows:

Attending to the symbolic form of particular art works provides a powerful focus for the performative researcher (and their audience) as each symbol functions as a means to conceptualise ideas about aspects of reality, and also as a means of communicating what is known to others. Consequently, auditing a work is never neutral: never the simple gathering of sensory impressions. Rather it is theory-dependent, as the experienced and informed 'eye' (or rather 'mind') is able to detect (and the 'brain' make intelligible) subtleties and nuances in the performative phenomena audited. In this way 'auditing' goes beyond the straightforward act of 'witnessing' required of other spectators and audiences (Haseman, 2006:9).

In terms of the external evaluation, the auditor is required to understand the traditions and context of the performance or particular creative genre. They must be empathetic towards the performance and be willing to immerse themselves in the creative experience. Additionally, the artistic audit needs to take place while the creative production is exhibited or performed in the appropriate space or circumstances (Haseman, 2006:8).

It would thus seem as if the artistic audit is a higher level of reading, reliant on the connoisseurship of the viewer. However, what makes this problematic in the research context is that the reading and related value judgment of this text is still seated in the experience of the reader. Thus, the performance functions as the focal catalyst that recalls individual proximal knowledge. If this process is not contextualised or directed, the reader could tap into a multitude of proximal dimensions (cf. Chapter three). Effectively, this position limits any engagement with existing research criteria and it is probably for this reason that Haseman (2006) does not elaborate on how these artistic audits need to be reported and disseminated. If they are to be reported in written terms, this is surely counter to the premise of his argument. Additionally, the audit process excludes two aspects viewed as central to PLR; that of the

personal reflective insider perspective and that of the notion of creative process.

The artistic audit therefore facilitates a situation in which the artist is forced to rely on external opinions (even if empathetic and informed) to explain the value of the work. In this scenario the knowledge is derived from an outside evaluation/perspective and not informed by insight through art making and reflective practice.

The concept of the auditing process is not a new one and may be seen as a combination of, and synonymous with, the concepts of artistry and personal and exploratory indwelling, presented in Chapter three (Polanyi, 1966b:30). In this case, experienced practitioners dwell on the creative experience and tap into tacit knowledge. Consequently, the focal creative output initiates the accessing of the proximal, which is informed by both artistry and theory. However, contrary to Haseman (2006), Polanyi (1966:7) advocates that the tacit and explicit knowledge are intertwined, and both communication modalities need to be fully utilised to understand performances. I am in agreement with Polanyi because the communication modalities of the artefact / performance and text differ, and text allows the contextualisation and enhancement of understanding.

Accordingly this issue that Haseman (2006) does not satisfactorily address, the multiplicity of readings informed by the personal experience and social environment of the reader, is what makes its transferability problematic. In this context, I concur with Biggs and Büchler (2008:16), that experience and the knowledge derived from experience, are on their own, too ambiguous in the academic context, and therefore do not contribute to knowledge, unless contextualised in some way. There is thus a disparity between those who promote the notion of performative research and those who have a clear understanding of the requirements or criteria of traditional academic research. So, while performative research as advocated by Haseman (2006) and Bolt (2008) functions in the professional artistic context, the notion of contextualised communication remains an obstacle in the academic milieu.

In the South African context and in accordance with Haseman (2006), Schmahmann (2011:30) makes it clear that she is also of the opinion that creative practice should function outside the constraints and restrictions of conventional research. Expecting

creative practitioners to produce scholarly writing about their work is problematic as it negates the fact that the artefact is itself a discursive engagement within a particular disciplinary paradigm. Additionally, she concludes that those academics who expect artists to produce writing about their work are ignoring the post-modern and post-structuralist concept that evokes the notion of the “birth of the reader at the cost of the death of the author” (cf. Barthes, 1984:142-148; Foucault, 1998:215-314). Concomitantly, interpretation of artworks often involves ideas, concepts and causal links that were outside the artist’s intention.

While this may be true, this does not mean that artists, particularly those in the academic context, should be excluded from the discursive practice that surrounds their work. This is particularly so considering the complex, conceptual and often obscure nature of contemporary art making. In addition, art making and writing in the contemporary context are often interrelated and intertwined and, thus, not necessarily two distinct discipline specific activities, as stated above. Accordingly I agree with Kosuth who is of the opinion that the artwork is a manifestation of the artist’s intention, when he states:

If my intention is denied at its inception, then my responsibility for the meaning I generate in the world as an artist is also nullified. The artist becomes just another producer of goods for the market, where the work finds its meaning (Kosuth, 1999:462).

Additionally, artists should afford themselves the opportunity of engaging in academic debate about the interpretation of their work and the work of others and not be forced into the position of an observer. In this regard Kosuth (1999:464) states that it is intellectually irresponsible for artists to be dependent on the art critic to establish the conceptual position and importance of their work,

I am therefore of the same mind as Mäkelä and Routarinne (2006:24) who consider the artefact or the creation processes, lacking an explicit contextualisation, as mute in the academic context. If practitioners wish to engage in the academic context (which they do not necessarily have to do) then they need to discuss the meaning of their work in terms of contribution to knowledge in relation to relevance and equivalence within existing research criteria (a situated position).

However, this needs to be a negotiated position and not one that enslaves the

creative disciplines to a system that devalues or ignores the tacit knowledge dimension. Without doubt, the interpretation and analysis, by art critics, of artistic production according to a particular theoretical framework within the critical theory paradigm is bound to continue. Nevertheless, artists can also take on a more decisive role in terms of theorising and contextualising their work. In this regard, the participatory paradigm with its non-reductionist conceptualisation of knowledge could be applicable. This will mean finding ways to utilise the extended epistemology of the participatory paradigm to address traditional research criteria. In the next section, which is primarily concerned with the situated position, I address the positioning of creative practice in the academic milieu.

5.4.2 The situated position within the academic context

In this section, I begin with a discussion of communities of dissatisfaction as conceptualised by Biggs and Büchler (2011). The aim is to highlight problematic issues that are indicative of the debate concerning the inclusion of creative practice in the academic context. Thereafter, the said issues identified by Biggs and Büchler (2011) and the conventional research criteria, as explained by Scrivener (2009:69-70) and discussed in Chapter four, are used to clarify the situated position of creative practice in the academic context.

5.4.2.1 Communities of dissatisfaction

According to Biggs and Büchler (2011:83, 87, 98), there are two distinctive communities of practice – that of the creative practitioners and that of the academic community of practice. A community of practice is defined as a group with a shared set of values, beliefs and practices that underlie their activities. As a result, there is also a set of criteria to which they adhere and which confirms their inclusion in the community. The knowledge that is important in this context is materialised through shared interests and concerns and is expressed in approved modes of communication.

The creative practice communities in this context are viewed as being satisfied by the conventions of creative practice. This community is characterised by the

communication of values and norms by means of artistic production, which normally consists of non-linguistic activities such as exhibitions and performances.

On the other hand, the academic community is controlled by, and encapsulated within, academic conventions and criteria that provide and contextualise the community's mode of functioning. These conventions facilitate the advancement of knowledge in a systematic/logical way by connecting concepts, and building on the accumulative knowledge production of others. This knowledge is disseminated (in textual format) to an academic community for evaluation.

It should be noted that Biggs and Büchler (2011), in the above distinction, have adopted an ontological and epistemological position that is aligned with the positivist or critical theory paradigms. As discussed in chapter four, research conducted in these paradigms is normally communicated in textual formats. Consequently, it is not surprising that dissatisfaction and disagreement have arisen where the activities of the creative practice community have been evaluated within these paradigms, since creative practice and the related knowledge communication modalities are thereby negated.

Biggs and Büchler (2011:85-87) identify four generic interdependent requirements for any academic research: 1) the formulation of a research question and a hypothetical answer³⁰; 2) a systematic methodological approach suggested by the theory; 3) the contribution to knowledge, of which its communication is expected to be logical, rational and unambiguous and is normally reported in textual forms; 4) such research must be relevant to an audience and distributed to the audience for validation.

Although the formulation is different, these criteria correlate with those for academic research discussed in chapter four, namely a systematic investigation of a particular subject or phenomena, conducted intentionally, to acquire new knowledge and understanding that is justified and communicated (Scrivener, 2009:69-71).

³⁰ In critical theory the notion of a hypothesis is replaced by a central theoretical statement or thesis.

Biggs and Büchler (2011:89-95) maintain that it is possible to conduct research that is acceptable to both communities of practice. However, this is always a compromised position, which leads to communities of dissatisfaction. Accordingly, there are five major, contentious issues, concerning: (1) the conceptualisation of knowledge; (2) the knowledge communication appropriate for the specific community; (3) the question and answer convention; (4) methodology, and (5) knowledge dissemination.

A causal link between these issues and the research requirements mentioned above exists. It should be noted that these contentious issues, presented below from the perspective of the authors, are discussed more critically in the subsequent section.

- 1) The conceptualisation of knowledge: Biggs and Büchler (2011:90) state that the academic community assumes that knowledge is communicable and impersonal. By communicable these authors are implying textual communication. Accordingly, in the academic context, subjective personal experience needs to be controlled and not encouraged or enhanced:

What is experiential is first-person, and therefore cannot be shared with other people. Because experience is something personal, its transferability is problematic and thus goes against the value of accumulation and the idea that there is something that can be shared in order to build a body of knowledge and interpretation (Biggs & Büchler, 2011:94).

What is meant by this is that the tacit dimension, which is central to the creative communities, is viewed as incompatible with the explicit dimension valued by the academic community. Once again it should be noted that Biggs and Büchler (2011) have defined the academic community from a post-positivist perspective, which is bound to be problematic for PLR and critical theory.

- 2) Knowledge communication appropriate for the specific community: An additional point of contention is the use of non-linguistic communication modalities in the creative disciplines. This is problematic for Biggs and Büchler (2011:91) because research in the academic communities is normally expressed linguistically, with the aim of presenting unambiguous and often generalisable research findings. Non-linguistic practice, which is a core value of

the creative communities with its associated multiplicity of meaning, is at odds with the unambiguous communication of knowledge as advocated by the academic community.

- 3) The question and answer convention is one of the cornerstones of academic research. In other words, research is the intention to prove or refute a proposed hypothesis. On the contrary, the artistic community values the process and products of creative investigation, both of which open up a multitude of exploratory possibilities. As a result, artistic productions lead to a multitude of possible answers and interpretations, which is at odds with the notion of a singular answer valued by the academic community (Biggs & Büchler, 2011:91).

- 4) Methodological approach: The methodological approach has to do with the singularity of methodology. For the academic community there are established methods and methodological approaches determined by the disciplines' conventions and ensuring the notions of objective, evidence-based answers to the specific question (Biggs & Büchler, 2011:93). The process of accumulative knowledge by the community of practice often ratifies the establishment of these methods. Due to the transformative nature of research in the creative communities, and critical theory for that matter, there are a multitude of investigative possibilities while the notion of formulaic research methods is rejected and the notion of the plurality of methods is viewed as more appropriate.

- 5) Knowledge dissemination: The fifth problematic issue is that research findings in the academic context need to be transferable and disseminated to the wider research community. In this context, all members of the academic community need access to the same information. Additionally, this information must be unambiguously communicated and connected to, and discussed in the light of, the accumulative knowledge of the larger community. This is problematic for the creative disciplines as it is often difficult to replicate an exhibition or performance.

In conclusion, Biggs and Büchler (2011) regard the academic and creative practice communities as two distinct communities with distinct audiences. Consequently, the type of functioning and inherent values of these two communities are at odds and any negotiated position or bridging strategy is cause for dissatisfaction with each other. Therefore they envisioned a third research paradigm that is not a position negotiated between the two parent communities:

As an alternative, we propose that there is a third and distinct community that is the offspring of the two parent communities. In line with the concept of authenticity, there should be a distinct research model that emerges from this community's own distinct values. This is not a third research model that can be hybridized from the values of the parent community, but instead should be faithfully linked to the values of this new distinct community of practitioner-researchers (Biggs & Büchler, 2011:98).

This third and distinct community of practice mentioned above seems to be different from the situated position. While the idea of a new community of practice is interesting, neither Biggs and Büchler (2011), nor Haseman (2006) and Bolt (2008) offer any pragmatic way forward in terms of conceptualising such a third community that does not hybridise aspects of existing research criteria. This may be due to the seemingly logical conclusion that if one wishes to engage in the academic context, aspects of it would need to be engaged with. In addition, it should be considered that if one does not wish to engage with the academic context then there is no need for the third community of practice to begin with. Nevertheless, the notion of this community is left as an undefined concept.

Furthermore, there are several problematic issues in terms of the argument presented by Biggs and Büchler (2011) in support of a third community of practice. Firstly, they seem to hold a narrow view of the academic community, which correlates with the positivist and post-positivist paradigms. In terms of these paradigms, the academic community's criteria for research are derived from the type of neutral research conducted in the natural sciences. As a result, the notion of objective knowledge is prioritised. Therefore, the disparity between academic research and research in the creative disciplines is not surprising if the positivist paradigm is used as a model for research. However, there is a rich tradition of social science and humanities research that values the notion of an intrinsic perspective,

reflective practice and interpretive practice which is more closely aligned with PLR and more useful in this regard (Archer, 1995:13; Kjølrup, 2011:28-33; Borgdorff, 2011:47-51). The process, in such a context, is more dialectical, and knowledge is viewed as subjective or even collaboratively inter-subjective.

Consequently, I concur with authors such as Gray and Malins (2004:3), Mäkelä and Routarinne (2006:12, 24) as well as Borgdorff (2011:45) who also view PLR as an activity that is initiated and contextualised in an academic milieu. In this sense, PLR is not viewed as something completely new, but is, rather, a valuable addition to the research matrix. However, what is important in this regard is that creative practitioners establish and understand the paradigm in which their research is situated. In the next section I explore this negotiated position within the academic context in order to align it with the appropriate research paradigm.

5.5 The situated position within the academic context

Research in the creative disciplines within the academic context, to be in line with the above-mentioned statement, needs to engage and negotiate research criteria that are relevant to creative practice. Douglas *et al.* refer to a decision made by the *Arts and Design Panel* of the United Kingdom to acknowledge practice-based output as research output. “...when it can be shown to be firmly located within a research context, to be subject to interrogation and critical review and to impact on or influence the work of peers, policy and practice (Douglas *et al.*, 2000:2)”.

Therefore, practitioners have accepted the utilisation of reflective practice as a fundamental way of understanding, and explicating their work. Inherent to reflective practice is the presentation of knowledge in both tacit and explicit formats. In this context there is a growing realisation that artists should no longer rely on the explication or theorisation of their work by others (Sullivan, 2006:26-27) or adhere to restrictive, inappropriate research criteria.

Therefore, for the purpose of clarity, I discuss the situated position of PLR in relationship to the research criteria of Scrivener (2009:69-71) presented in Chapter four, while also addressing the corresponding issues identified by Biggs and Büchler (2011:89-95). The purpose of this is to discuss the understanding and application of

these criteria in the PLR context. Table 2 presented below correlates aspects of Scrivener's (2009:69-71) research criteria and problematic issues identified by Biggs and Büchler (2011:89-95).

Table 2: Correlating aspects of academic research criteria according to Scrivener and the communities of dissatisfaction described by Biggs and Büchler

Academic research criteria (Scrivener, 2009: 69-71)	Communities of dissatisfaction: Problematic issues identified by Biggs and Büchler (2011:89-95)
A systematic investigation of a particular subject or phenomena can be considered as the method condition (Scrivener, 2009:70-71).	Methodology has to do with the singularity of methodology. For the academic community there are established methods and methodological approaches, which are determined by the discipline’s conventions and ensure the notions of an objective evidence based answer to the specific question (Biggs & Büchler, 2011:92-93).
Conducted intentionally: This is the intentionality condition clause, which is related to the notion of identifying and answering a specific research question (Scrivener, 2009:70-71).	Question and answer convention: Academic research conforms to a pre-established question and answer scenario. This is of course linked to the notion of intentionality and a predetermined hypothesis (Biggs & Büchler, 2011:91).
To acquire new knowledge: Understanding and insights: this is the goal condition, which is related to contributing to the knowledge and knowledge accumulation of a particular academic community. The judgment of the “newness” or originality of knowledge is not a case of individual justification but is judged and validated by a community of research peers	Concerning the conceptualisation of knowledge: The academic community assumes that knowledge is impersonal and explicitly communicable in textual terms (Biggs & Büchler, 2011:90-92\94-95).

<p>working in the relative knowledge discipline. Such knowledge justification is a collective collaborative and social activity (Scrivener, 2009:70-71; Biggs, 2006:2).</p>	
<p>About a subject: the subject condition, which contextualises the investigation within the framework of the discipline and academic community (Scrivener, 2009:70-71). This has to do with the justification and communication of knowledge.</p>	<p>Knowledge communication appropriate for the specific community: for the academic communities knowledge is expressed and communicated linguistically with the aim of presenting unambiguous and often generalisable research findings (Biggs & Büchler, 2011:90/95).</p> <p>Knowledge dissemination: research findings in the academic context need to be transferable and disseminated to the wider research community. In this context, all members of the academic community need access to the same information. Additionally this information has to be communicated unambiguously and connected to, and discussed in light of, the accumulative knowledge of the larger community.</p>

5.5.1 A systematic investigation

The subject of systematic investigation is concerned with the method of investigation that has to be systematic and is required to provide a logical answer to the phenomena being investigated (Biggs & Büchler, 2008:10; Scrivener, 2009:70-71).

The method is the mechanism that assists the researcher in conducting an investigation and that connects the research question to the answer through a process of contextualised argumentation (Biggs & Büchler, 2007:67; Slager, 2011:335). In other words, it is the way in which the problem or question is going to be addressed. The types of questions asked, and the methods used to address the questions, are discipline, community and paradigm dependent. A philosophical question, for example, demands a philosophical answer whereas a practice-led question demands a practice-led answer. Investigations conducted as PLR involve, as method, artistic action, creation and performances that need to be contextualised within the cultural context (Borgdorff, 2011:57; Sullivan, 2011:99; Farber, 2010:2).

The methodological approach will obviously depend on the theoretical approach, which in its turn, is informed by the research paradigm. In theoretically orientated disciplines, the theory normally suggests the method, while in PLR practice, in combination with theory, determines the method. Research on art and research through art per se initiate different approaches because they function in different paradigms (Chapters one and four). Research on art is more interpretive and dialectic in nature than research through art, and functions within the critical theorist paradigm. Theoreticians within that paradigm use conceptual frameworks, such as post-colonialism, to interpret and derive the meaning of artworks. Research through art is more attuned to PLR and the participatory paradigm, due to the extended epistemology it accesses by valuing both the tacit and explicit knowledge dimensions. Therefore, research through art involves methodologies that place creative practice, which includes a variety of creative processes and artefacts, at the centre of the investigation and, which in turn, result in reflective conversations. These conversations frequently allow for the opportunity to engage with other disciplines and allow for multidisciplinary research (Gray & Malins, 2004: x).

Due to the diverse nature of the creative disciplines, it is not possible to reduce PLR to a formulaic research approach or method. The reason for this is that PLR is characterised as an exploratory journey that entails working from the “unknown to the known” (Sullivan, (2011:100) with a multitude of interpretive possibilities. In this sense, the artistic process in the research context is unpredictable and therefore changeable, and often investigates the notion of possible futures (Borgdorff, 2011:57; Sullivan, 2006:19; 2011:17; Slager, 2011:335; Scrivener, 2004:2; Candy & Edmonds, 2011:120).

As a result, the development of a coherent formulaic research approach is unlikely in terms of PLR (Gray & Malins, 2004:18; Biggs & Büchler, 2008:11). Kjølrup (2011:41-42) concludes, and I concur, that a formulaic methodology should not be viewed as desirable, because it is the emergent potential and diversity of interpretive possibilities that characterise artistic practice:

On the contrary, once you let go of the idea of a small set of formal criteria for what may count as ‘real research’, you open the doors for a serious and much more interesting discussion about what should be considered good research that gives us interesting, eye-opening, inspiring, enlightening, fascinating, edifying, uplifting contributions to knowledge and insights that are also well-founded, justified, persuasive (Kjølrup, 2011:41- 42).

Because every PLR creative process is unique, the research methods often develop as the process unfolds (Scrivener & Chapman, 2004). In this context, research needs to be both systematic and rigorous as well as inventive and imaginative in order to capture the complex individual, social and cultural interaction (Sullivan, 2006:20). This may initiate mixed methods involving diverse research approaches and techniques (Gray & Malins, 2004:21-32; Sullivan, 2006:23-24; 2011:115-118; Slager, 2011:338). The method is often determined by the particular direction that creative practice takes. In this scenario Gray and Malins (2004:182) regard arts and design researchers as “methodological trailblazers”, while Borgdorff states:

We can justifiably speak of artistic research ('research in the arts') when that artistic practice is not only the result of the research, but also its methodological vehicle, when the research unfolds in and through the acts of creating and performing. This is a distinguishing feature of this research type within the whole of academic research (Borgdorff, 2011:46)³¹.

However, although the serendipitous nature of PLR is acknowledged, it still remains a systematic research process. A systematic procedure and the establishment of a research question, of one sort or another are viewed as central to any research undertaking. Creative productions created without question and answer scenarios are more indicative of professional practice than PLR (Biggs & Büchler, 2008:9).

In terms of PLR, the notion of systematisation is viewed as the process of describing the chain of reasoning that enabled practice to inform the navigation of theory and vice versa, and of explaining how this bifurcated, yet integrated, exploration and generation of knowledge relates to the context and concept of the artefact. This chain of reasoning extends further to include the critical contextualisation of the systematically documented process and its outcomes, which is important as it further contributes to the systemisation and rigour of the process. This chain of reasoning is important to the defence of the argument in which the practitioner claims originality (Biggs, 2006:6). Therefore, this chain of reasoning, in the PLR context, is generally accepted to be a combination of artefact and written exegesis. The chain of reasoning needs to be clear, intuitive and well motivated in order to contribute to the rigour of the research (Biggs & Büchler, 2007:69).

Munro (2011:157-158), drawing on the work of Sawyer (2006:117-136), offers an insightful perspective on the different interrelated dimensions or components that inform decision making during the creative process, and by implication the PLR process. These are: 1) the idiosyncratic or the individualistic, 2) the domain or discipline and 3) the field or gate-keeping mechanisms. This perspective is sociologically informed and perceives the individual as the product of the interaction between the self, the environment and the cultural context to which he or she is exposed and with which she or he interacts. It should be noted that the idiosyncratic,

³¹ Borgdorff's "artistic research" is what has, to this point, been referred to as research through art.

domain and field components are dependent on a relationship that is considered compatible with the participatory paradigm.

In the interest of clarification, the idiosyncratic in the PLR context is related to the utilisation of experiential and tacit knowledge in order to solve the particular problem. Each individual has unique experiences that inform their perspective and in turn inform the environment and context in which they engage. This is what is referred to as the “designer’s profile”, which could be extrapolated to the “creative practitioner’s profile”. In this context the latter profile is the sum of the unique experiences and related artistic repertoire (Chapter three) that the practitioner has accumulated to date, and is referred to as the cultural idiosyncratic (Munro, 2011:158).

The second component, domain, correlates to the notion of communities of practice (Biggs & Büchler, 2011:83, 87, 98). In such a sense, the domain refers to the particular discipline in which a practitioner works and the related, generally accepted methods and practices of this discipline. Domains are additionally informed by educational structures that propose certain theories and practical examples as exemplars of good practice. The domain can also be referred to as a culture of practice as it facilitates a shared understanding of practical and theoretical discourse that informs creative production (Munro, 2011:158-159). In terms of PLR, the cultural idiosyncratic, domains and field components are interrelated and reliant on each other. According to Amabile (1996:83) the *Domain relevant skills* are related to a specific domain, such as factual knowledge, technical skills and special talents, which may be utilised and / or synthesised to solve problems. This could be viewed as relational to Schön’s (1983:22) notion of artistry discussed in Chapter three. Therefore, when practitioners engage with PLR projects, they need to utilise both the domain relevant skills of the discipline and the interrelated PLR skills.

The last component is that of field, and refers to a collection of leading experts (recognised practitioners, educationists, theorists, and critics) in a particular domain. In this capacity, they influence the theoretical, philosophical, technical and aesthetic direction of a discipline. They are thus considered gatekeepers who influence what is considered acceptable practice, and determine adjudication and assessment criteria. What makes the creative discipline’s field interesting is that its members rely heavily

on the cultural idiosyncratic in advocating work which is innovative, creative, and boundary shifting (Munro, 2011:158) and which is typically difficult to describe in written terms. This is similar to Schön's (1983:272) concept of discipline related appreciative systems, discussed in Chapter three.

It is thus clear that creative production is informed by the interaction between the idiosyncratic culture (personal perspective), the domain (culture of practice) and the field (gate-keepers). This is related to the notion of triangulation, which is typical of quantitative research. One begins with the personal perspective that is informed by divergent thinking, and which is later informed by the domain and domain relevant skills that are tempered by the field (Munro, 2011:162). While it is recognised that the distinction between the concepts is not always clear-cut, these concepts are useful in the context of PLR, since the interaction could be viewed as a process of validation and justification.

However, it is important to recognise that art making (for example producing an exhibition, which is not related to any academic context) will have a different notion of the idiosyncratic, domain and field from that of PLR. In this context, PLR is informed by and influenced by both creative practice and academic research criteria (situated position).

In terms of developing an epistemological position that underpins idiosyncratic culture, the PLR domain owes much of its theoretical framework to the conceptualisation of tacit knowledge and reflective practice, as discussed in Chapter three. The distinction between the proximal and focal dimension of tacit knowledge facilitates the idea that "we know more than we can tell" (Polanyi, 1966b:4) and it is during the creative production process that the proximal emerges and informs understanding. Hence, one of the distinguishing factors in research in the creative disciplines is that the research process moves from the "unknown to the known" and not from the "known to the unknown" Sullivan, (2011:100).

In light of the above, Munro advocates auto ethnography, etymologically stemming from "auto" (the self), "ethno" (the culture) and "graphy" (writing) as a relevant method for recording the line of reasoning or narrative, since it places the artists' and

designers' personal response as central to recording the creative production which equals the auto (the self). Ethno has to do with contextualising this production within a domain or culture of practice. Graph has to do with writing the process, by means of written and visual language that will satisfy the requirements of the field.

Insight and intuition are important to the research process and are contextualised in terms of the artist's repertoire and skilful interaction (Borgdorff, 2011:55). The creative process and journey are as important as the final artefact or text. The data gathered to explicate the research path is a rich combination of words and artefacts that reflect the insight of the insider (Sullivan, 2006:23). Therefore, Schön's (1983/1987) conception of reflective practice, accompanied by the related concepts of reflection-in-action and reflection-on-action, is a way of contextualising this reflective conversation during which tacit discipline related skills are utilised. Reflection-in-action is not only an analytical process of framing problems and reacting to the situation but also a method of recording the process and determining what the most appropriate future action might be. It is a way of moving from the present state to a desired state while remaining open to the new possibilities that may arise (Schön, 1983:54/79; 1987:28). Experimental modes, identified by Schön's (1983:145-146) exploratory experiments, move testing experiments and hypothesis testing experiments, facilitate the process (cf. Chapter three). Thus, the recognition and utilisation of tacit knowledge by means of reflective practice during the creative production may result in new insights, understandings, methods and products. Additionally, reflection-in-action, in combination with the utilisation of tacit knowledge modalities, is appropriate to PLR, because creative productions are viewed as a journey of discovery, which allows for and is open to the inclusion of new unexpected interpretations and or executions. In this way, PLR creates reflexive zones of novel apprehension (Sullivan, 2011:100).

Based on Schön's (1983) theory of reflective practice, Scrivener and Chapman (2004) developed the creative production cycle that takes the exploratory, changeable and serendipitous nature of PLR into account. In this model, artistic production and exploration via established research frameworks are integrated, providing a practical and pragmatic method (Niedderer, 2009:2). Although this cycle, as detailed below, is not the only approach, it demonstrates that while PLR is

complex and uncertain, it can still be structured and systematic.

Step 1: The beginning of the cycle is an appraisal of current practice and the identification of issues and theories that underpin this practice and might inform future exploration. At this stage of the process, the initial impetus can, in the case of creative practice, be informed by hunches, an ill-defined proposition or even intuitive exploration. It should be noted that Scrivener and Chapman (2004) consider theory as integral to and integrated into the creative production cycle.

Step 2: In this step, additional information (theoretical and contextual) that will inform the creative production and reflective practice cycle is explored (Scrivener & Chapman, 2004). This is similar to what Gray and Malins (2004:14, 36-38) call a “contextual review”; in traditional research terms it may be equated to a literature review. Initially, an overview of the research area is determined and demarcated. Thereafter, this information is reviewed in order to narrow down investigation and identify a tentative research question. This process not only includes paper-based literature but also visual audits of artworks, exhibitions and the like. This step of the process will allow for the discovery of a research question and determine a strategic approach (cf. Gray & Malins, 2004:14).

Step 3: Issues and critical thinking discovered in step two subsequently inform the reflective creative production cycle, which is recorded in various formats such as visual journals, video and drawing.

Step 4: The revision of practice, the post project reflection and practice itself will serve as the outcomes of the project. In this context, thinking and making are connected in a reciprocal cycle of knowledge creation and dissemination (Scrivener & Chapman, 2004).

In this model all the aspects of a research process are engaged with. Step one is concerned with the identifying of research issues (the what? question). Step two is an evaluation of the research context (the why? question). Steps three and four, often running concurrently, are essentially the process of developing a methodology and analysing and interpreting the findings (the so-called how? question). Step five is the

synthesising, communication and dissemination of the findings. This four-step process described above is essentially auto ethnographic, utilises the idiosyncratic, domain in recording the line of reasoning and is approved by the field.

The principles that underpin the model proposed by Scrivener and Chapman (2004) are:

- 1) The positive relationship between creative excellence (innovation, originality and skilful practice) and reflective practice;
- 2) That reflective practice is a productive mode of personal creative development which enables practitioners to give an account of their process and work. This includes explicating overarching theories, appreciative theories and records of unexpected consequences;
- 3) These records, which are often a combination of different media, can serve as valuable research records.

Although this is not the only way of conducting PLR, it demonstrates that it is possible to conduct systematic investigations that will guide, in execution, and produce, as an outcome, critically engaged creative practice. This process creates a better understanding of the creative process while still allowing for the evolving, serendipitous and intuitive nature of creative practice (Steyn, 2009).

Accordingly, the creative practice and academic communities of practice do not have to be at odds with each other as argued by Biggs and Büchler (2011), and noted in the previous section. In contrast, it is possible and even preferable to have a plurality of methodologies and an open-ended method and structure to guide PLR in the academic context. PLR is able to operate within the participatory paradigm in which the epistemological primacy is placed on practical knowing and critical subjectivity that are made manifest through self-reflective practice (Heron & Reason, 1997:290). The methodology employed during a study is related to and symptomatic of the intent of the study, which is the next topic of discussion.

5.5.2 Conducted intentionally

The intentionality condition clause is related to the notion of identifying and answering identified research questions (Scrivener, 2009:70-71). Standard art

practice (outside of the academic context) does not predominantly intend to enhance explicit knowledge. However, PLR is conducted with the express aim of being relevant in the professional art world as well as making a contribution of knowledge in the academic world. On this point I concur with Borgdorff (2011:54), who believes that PLR should make a contribution to the development of art practice and enhance our cognitive understanding of what art practice is, or could be. Thus, PLR is a dialectic process that is guided by practice and elucidated by means of related theories.

The majority of research in the academic context is conducted intentionally, whether it is to gain a qualification or participate in collaborative research projects. Intention as used in the above paragraph is framed within the parameters of the traditional research process, which requires the recognition of a research problem. This necessitates the formulation of a set of research objectives that guide the study. The process requires that the researcher do a fair amount of reading in order to identify a knowledge gap and identify appropriate theories that will shed light on the research problem. This course of action draws on established structures and procedures such as a research proposal, which may vary in format, but for the most part contains the same basic elements.

The research proposal serves as a roadmap for the duration of the study: although this proposal is not written in stone, to a large degree it guides the process. For example, a typical art historical study will identify an artist, artwork, a series of works or art movements and conduct a reading and interpretation by means of a particular theory or from a specific philosophical or theoretical framework. Interpretation is informed by the artist's biographical information and the socio-political context. Hence, the artworks become the objects of study and the process is largely dependent on pre-established theoretical constructs. Although there are many variations in terms of research design and methodology, the research process of establishing a hypothesis or central theoretical statement and evaluating the result against the aims and objectives of the study are standard practice.

PLR differs from this process as it is generally led by exploration and not by a hypothesis (Borgdorff, 2011:56/57). This process must allow the artist to utilise

intuition and to stumble upon unexpected and surprising results. Borgdorff (2011:56) suggests that formulating a research question may limit the investigation and is thus undesirable. However, I contend that formulating research questions and objectives is a useful process to initiate and guide the investigation. Nonetheless, the exploration can take alternative routes or evolve in different directions. While it is understood that the direction of traditional research may also change as the research develops, in PLR this changeability is considered as unavoidable, particularly in light of the pluralistic and often collaborative nature of PLR.

In support of this, Sullivan (2009:48; 2011:100) contends, and I agree, that academic research is a process of working from the “known to the unknown”. The research trajectory in PLR is somewhat more changeable, intuitive, serendipitous, and unpredictable, which involves working from the "unknown to the known". The changeable nature of a practical investigation is due to a reliance on tacit knowledge, as discussed in Chapter three. In this context, the appearance of focal issues uncovered during practice will tap into proximal knowledge of which the researcher may have been unaware at the time, which will in turn influence the investigation. Accordingly, establishing a precise research roadmap is problematic in that this is an exploratory journey of discovery, as Sullivan states:

With this in mind, an interpretive perspective would assert that if you don't know where you're going, then it is best to surround a problem in order to solve it. Here, research and educational inquiry are based on the assumption that knowledge emerges from an analytic and holistic account through consensus and corroboration where patterns and themes are the elements used to represent complex realities. Knowledge in this sense is explored as a difference in 'kind' or quality, where insights are characterised by their particularity. This is how we construct plausible theory (Sullivan 2006:19).

While it is useful to establish a research question in the interest of generating a contextualised PLR-based response, the question can be "framed" (Schön, 1983) as a theme rather than a specific question, if necessary (Biggs & Büchler, 2008: 9). This does not mean that the mere act of documenting the creative process can be characterised as research. This process of exploration is not an undirected unsystematic investigation and, in the academic context, there is still the intention of claiming originality, with the support of a contextualised argument that is

disseminated for peer evaluation (Farber, 2010). Methods and structures that take the nature of PLR into account, such as the one described above by Scrivener and Chapman, (2004:6) are instrumental in structuring and guiding the investigation. This is the case, particularly in light of the fact that the participatory paradigm offers an extended epistemology of experiential, presentational, propositional, and practical knowing (Heron & Reason, 1997:289).

Contrary to the opinion of Biggs and Büchler (2011), PLR generally conforms to the question/answer convention of traditional research, but is not confined or restricted by it. In terms of negotiating a position in the academic context, PLR is able to conform to both the method condition and the intentionality clause if they are perceived as allowing space for the combination of tacit and explicit knowledge. However, the primary goal of this process is the acquisition of new knowledge, which is the next topic of discussion.

5.5.3 The acquirement of new knowledge

The goal condition is to acquire new knowledge, understanding, and insight, and is related to the knowledge accumulation of a particular academic community. The judgment of the “newness” or originality of knowledge is not a case of individual justification but is validated by a community of research peers working in the relative knowledge discipline. Such knowledge justification is a collective, collaborative and social activity (Scrivener, 2009:70-71; Biggs, 2006:2; Munro, 2011:156, 157).

According to Niedderer (2007:5) the prioritisation of propositional knowledge by the academic community is due to the fact that regulatory bodies such as those in the United Kingdom have not clarified the term “knowledge”. In my opinion, this is one of the reasons why the use of the familiar ontological and epistemological knowledge communication assumptions of the positivist, post-positivist, critical theory and constructivist paradigms is perpetuated. Consequently, the inherently text based communication modes of these paradigms shape the conventions and evaluation/justification criteria to evaluate text based propositional content. Propositional knowledge is probably prioritised because other knowledge forms that evade textual explication are difficult to understand and evaluate. Consequently, the creative practice community functioning within the academic context must find ways

to introduce the tacit dimension, albeit in contextualised multimodal formats.

The participatory paradigm, as discussed in Chapter four, with its extended epistemology that advocates the combination of dialectic interaction between experiential, propositional, presentational, and practical knowing (Heron, 1996:53; Heron & Reason, 1997:280-283, 289), is a more appropriate paradigm for PLR. The reason is that the participatory paradigm allows for, and advocates the utilisation of, both the artefact and the text as contributing knowledge modalities. Additionally, Heron and Reason (1997:280) contend that the participatory paradigm allows for holistic, socially relevant investigations and interpretations of events. The aim of these investigations is often transformative in nature and directed at bringing about social change, which correlates with the purpose of some creative production.

In this context, the participatory paradigm and PLR both view multimodal communication (Polanyi, 1962:13-14; Schön, 1983:104/162) as appropriate for gaining a holistic, non-reductionist picture of knowledge. In this sense, and consistent with the participatory paradigm, the contribution that artists may make to the research context is the utilisation of individual experiences, emotions and their relationship to the world. This is to give insight into the human condition as opposed to scientific concepts of knowledge, as stated by Sullivan:

When art practice is theorised as research, it is argued that human understanding arises from a process of inquiry that involves creative action and critical reflection. As a significant means of human understanding, art practice is very mindful work as it makes good use of cognitive processes that are distributed throughout the various media, languages, and contexts used to frame the production and interpretation of images (Sullivan, 2006:28).

Accordingly, the contribution to knowledge lies in the process of bridging the gap between traditional research and practice. Therefore, PLR needs to remain relevant to professional creative practice and academia. As mentioned, one of the concessions that seem to be generally accepted is the need to explicate artistic practice by means of text. Biggs (2002a:4) contends that text and the artefact employ different communication registers, which, in combination, represent a whole concept. In other words, neither making nor writing alone can represent a concept in its entirety.

In terms of performative research, as discussed in the previous section, the artefact in the academic context cannot be left open to uninhibited reading. This is because not contextualising the artefact is not a neutral position but simply allows the viewer to project his or her own preconceptions onto the work. While this might be appropriate in professional creative practice, it is not the case in academia. Consequently, in order to claim a contribution to knowledge, the contextualised, authorial interpretation is required, since the viewer may not understand or share the cultural context on which the research is founded. In this sense, I concur with Niedderer *et al.* (2008:5) who consider the authorial perspective important in order to transform the intention from the claim of significant (uncontextualised) to the claim of meaning (contextualised). In this context, meaning refers to the theoretical and or historical contextualisation of artistic intent. Text is useful in this situation as it has a formalised syntax and can be utilised to communicate in an unambiguous manner. Therefore, text allows the researcher to step beyond the artefact and place it in an historical, cultural, critical context (Biggs & Büchler, 2008:14). However, textual exegesis should not negate the unique communication modalities of the artefact (Biggs & Karlsson, 2011: xv). It seems logical that it is not possible to adequately discuss and describe a painting or a piece of music in text alone, without including the work of art and the experience of it.

With reference to the notion of the two communities of practice (academic and creative) referred to earlier, I argue that the participatory paradigm offers a viable negotiated position. The experiential, presentational and practical knowledge dimensions (that are related to the notion of tacit knowledge) satisfy the creative communities of practice needs. This is important because despite many differences, the one aspect that seems to be consistently emphasised in terms of PLR is the primacy of creative practice and by implication, of the artefact (Borgdorff, 2011; Mäkelä & Routarinne, 2006; Niedderer, 2007). The creative production and the artefact are now not only the object of study, but is coupled with the process method and journey of exploration. The production of artefacts is the pathway that leads to new insight and understanding.

On the other hand, the academic community might be satisfied if PLR is explicated in terms of propositional explanations or arguments that adhere to the traditional

research criteria. Propositional knowledge in this context is a language-based statement usually based in theory or a theoretical construct, and in terms of research consists of the logic of verification and defence of this intellectual position through argument and evidence (Niedderer, 2007:6). While it is acknowledged that there are a multitude of functions, formats, styles and approaches to writing in the PLR context (Robson *et al.*, 2010), this issue falls outside the scope of this study.

Although the artefact or artistic production elicits a multiplicity of interpretive possibilities, PLR requires that the practitioner frames his/her research within a particular context. It is for this reason that the combination of the creative output and a textual explication thereof is preferred in the academic context. Consequently, I am in accord with Mäkelä and Routarinne's (2006:24) statement that the understanding of the tacit knowledge embedded in the artefact needs to be explicated in words by the artist. This exegesis is necessary in order to allow for critical analysis and validation (Scrivener, 2002).

Positioned in this way, PLR can conform to and extend institutional research requirements without being limited or incarcerated by them. Therefore, in line with the participatory paradigm (Heron & Reason, 1997:283), PLR is viewed as a subjective / inter-subjective research mode, which is regulated by critical evaluation and reflective practice (Schön, 1983:104/162). Creative practice and the artefact thus have the capacity to contribute to new knowledge and advance both theory and practice, if adequately contextualised (Niedderer, 2009:8). Tacit knowledge in this context maintains primacy of position, but must be contextualised and explicated by means of text in order to present a holistic knowledge construct that can be accessed and utilised by other researchers in the field. This brings us to the issue of knowledge justification and communication.

5.5.4 Justification and communication

As the contribution to knowledge in terms of PLR is a combination of tacit and explicit knowledge, both these modalities need to be communicated effectively. Tacit knowledge is made manifest through the creative process and culminating creative production that is presented as a work of art or artefact. Explicit knowledge is usually communicated by means of written text. It was noted that the exegesis of research by

textual / written means and the conventions of this communication mode have existing precedents in the academic context. However, the use and communication of the tacit / artefact dimension are more problematic. As discussed in the previous section, the artefact, by nature, opens itself to a multiplicity of possible interpretations that need to be contextualised in order to qualify as PLR. The justification and communication of PLR would imply that it is clearly communicated and contextualised within an existing body of knowledge. However, in terms of PLR it would also imply that the final work is an original creative production. Hence, PLR is viewed as the contextualisation of such a production by the practitioner.

The participatory paradigm, offering its subjective-objective ontology and critical subjective epistemology, is valuable in understanding the justification and communication process. Of particular relevance are the four ways of knowing, experiential, presentational, propositional and practical, and their interrelatedness in terms of the dialectical process model (Heron, 1996:167). In the model presented (Chapter four) the four knowledge modalities are involved in dialectical bi-directional interaction (See figure 5). In this context these are grounded in and supportive of each other. Therefore, if PLR highlights all these knowledge modalities and their interrelatedness, it can effectively communicate knowledge.

In terms of documentation, communication and dissemination, PLR presents certain challenges. This is due to the fact that final events, such as exhibitions, are often temporal, as well as site and context specific. They cannot be archived in their original format, nor accessed in this context after the event. This is problematic in the academic context, as researchers would ideally like to access the creative production as originally planned and executed by the practitioner. However, this situation is not unique to PLR since research methods such as action research are for the most part also non-objective and situation specific (Archer, 1995:13) and the situation or issues that are being researched are difficult to repeat. Therefore, in order to make PLR available for other researchers while still maintaining its integrity, creative productions must be documented in ways that communicate/approximate the original context as closely as possible. The purpose of documentation is to contribute to the accumulation of knowledge and to create an accessible archive. Documentation can be executed in different ways, such as by means of making a video, by photography

or by recording interviews. Additionally, the utilisation of digital interactive technologies affords the opportunity of combining different media and linking images, process and text by means of hyperlinks that could display the dialectic nature of the production. In other words, the artist could, for example, digitise visual journals and create hyperlinks to the sources of inspiration, relevant text and / or final artwork. While it is realised that this cannot be equated with the real event, such footage is able to be repeatedly scrutinised and is useful research data. An example of this type of strategy is evident in the online version of *Literator* (2012:1[33]) that was created for the TBP project in which articles were hyperlinked to the project webpage.

In terms of knowledge communication in the participatory paradigm, propositional knowledge is paired with experiential and presentational knowledge in order to contextualise and direct understanding. This could be done in various ways such as project reports or more theoretically inclined discussions of the creative process and final work of art. The combination of these knowledge modalities ensures that words are not expected to replace the experience offered by the creative production and that the creative production is not expected to act as propositional content.

Biggs and Büchler (2011:91) contend that traditional research, which is presented in unambiguous written often-generalised terms, is incompatible with the non-linguistic practice of the creative communities. This is, however, only true if knowledge is viewed from a narrow positivist perspective. Furthermore, their contention that creative practitioners rely on purely non-linguistic forms of communication, is also problematic. If one for example, considers fine art exhibitions, it is true that there are the purely practical exhibitions that are left to individual interpretation; however, many exhibitions are contextualised and theorised in textual terms by means of artist statements/manifestos or a catalogue. This correlates with what Vergo (1989:48, cited in Niedderer *et al.*, 2006:6) calls “aesthetic exhibitions and conceptual exhibitions”. Accordingly, the majority of contemporary exhibitions, particularly those that wish to be considered PLR, are contextualised by some form of textual explication (Gray & Malins, 2004:168-172). Therefore, contrary to the opinion of Biggs and Büchler (2011:91), the contextualising of artistic production by means of textual explication is not necessarily a foreign concept in the creative practice community. In terms of knowledge communication, PLR offers a multimodal

communication and dissemination of knowledge that is based in the ontological and epistemological foundations of the participatory paradigm.

In terms of a negotiated position in the academic context, the academic community is expected to engage with these knowledge modalities and judge them on the validity and artistry with which they were executed. On the other hand, the creative community must present the knowledge modalities in an intelligible manner. Therefore, it is in the combination, communication and dissemination of these knowledge modalities that PLR can make a contribution.

5.6 Practice-led research as collaborative activity

Practice-led research is often conducted as a collaborative activity, as stated in Chapter one. The multi-practitioner arts-related PLR projects conducted at NWU, discussed in Chapter two, are indicative of this international and national trend (cf. Rust *et al.*, 2007; Marley & Greyling, 2010; Marley, 2012). In this context, a theme is explored by a group of participants who are involved in explicating the issue at hand from different perspectives. This type of interdisciplinary interaction in the academic context results in multi directional learning and the development of both practical and theoretical (research) knowledge (Gray & Malins, 2004:21; Nowotny, 2011: xxv).

Within the exploration of a theme, collaboration can assume various guises. In her research on collaboration among individuals engaging in creative work, John-Steiner (2000:196-204) identifies four patterns of collaboration. These patterns, which are concerned with roles, values and working methods, are distributed, family, complementary and integrative collaboration. Collaboration, which often starts out as a certain pattern, can alter over time. Additionally, one or a combination of collaborative methods may occur during multi-practitioner arts-related PLR projects.

Distributed collaboration is characterised by informal conversations that occur in casual settings such as conferences or by artists who share a studio. Similar interests link collaborators; these interactions may lead to new insights and lasting partnerships or the group may disband if interaction and interest dissipate (John-Steiner, 2000:197-198).

In family collaboration, the group members are committed to each other over a long period of time. In this context, the group members become familiar with each other and their respective roles. During the course of the partnership roles may shift. However, according to John-Steiner (2000:201) family collaborations have a half-life, as the intensity of these partnerships cannot be sustained.

Complementary collaboration is the most common pattern of collaboration and is characterised by a division of labour based on complementary expertise, disciplinary knowledge, roles and temperaments. Collaborators negotiate about goals and strive towards a shared vision, sharing insights with each other on their craft, their respective domains or their self-knowledge as artists. Often knowledge is communicated which facilitates new modes of expression derived from the skills base of the participants (John-Steiner, 2000:198).

Integrative collaboration is characterised by a commitment to an activity over a prolonged period of time. These collaborations are driven by dialogue and a shared vision. A shared set of beliefs or ideology sustains the group that is motivated by the desire to transform existing knowledge into new artistic approaches and vision (John-Steiner, 2000:203).

Integrative collaboration is comparable to the notion of reflective practicums (Schön, 1987:36-37; Chapter three) and co-operative inquiry (Chapter four) proposed by Heron (1996) and Heron and Reason (1997). Co-operative inquiry and reflective practicums are similar methods that can be accommodated in the participatory paradigm. These methods entail a group of people researching a topic from an insider, critical-subjective vantage point. This process, that prioritises both tacit and explicit knowledge, requires the exploration and validation of knowledge by means of corrective inter subjective reflective cycles (Heron, 1996:75-78).

In terms of the TOKC, inquiry is conducted by what Nonaka and Von Krogh (2009:648) refer to as self-organising teams. These teams consist of individuals who have the experience, technical and theoretical knowledge to solve a problem. Shared experience and dialogue are also utilised in the exploration of

the issue at hand. As will be substantiated in subsequent chapters, the knowledge conversion mechanisms associated with TOKC are considered to be a refined form of co-operative inquiry.

The practice-led research projects conducted at the NWU were designed and executed with the realisation that a multitude of research possibilities could be explored. It is for this reason that both theoretically and practically inclined disciplines were included in these projects. Consequently, it is contended that projects of this nature should accommodate research approaches comparable to these disciplines while also allowing and encouraging hybrid and complementary research possibilities. *The iterative cyclic web* conceptualised by Smith and Dean (2009: 20) as illustrated in Figure 6 gives an overview of the type of interactions and research that may occur in collaborative PLR projects.

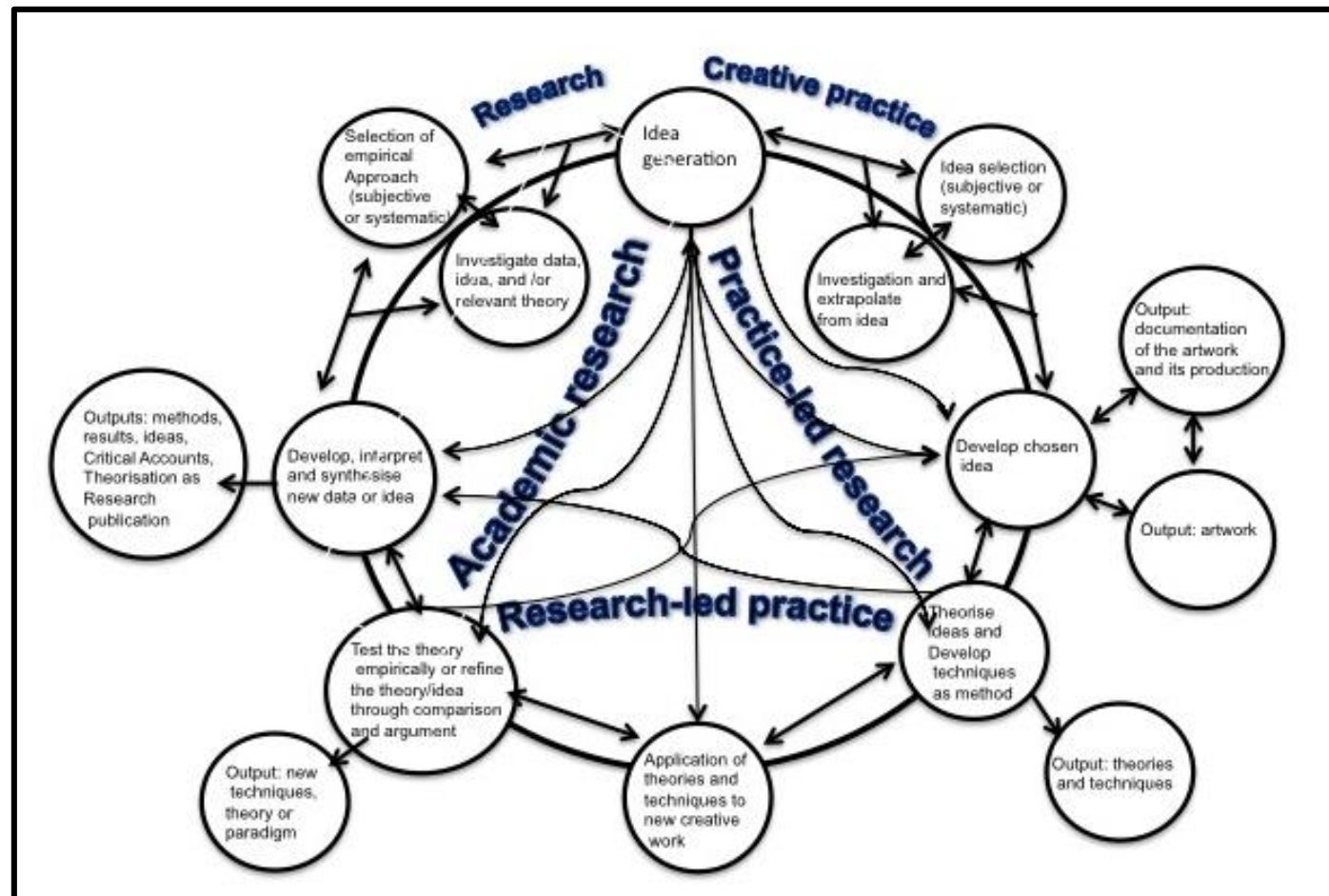


Figure 6: A model of creative arts and research processes: the *iterative cyclic web* practice-led research and research led-practice (Smith & Dean, 2009: 20).

Therefore, while multi-practitioner PLR projects are intended to promote PLR, this does not mean that other knowledge generating research activities are negated. The management approach for PLR projects should therefore allow for such exploratory possibilities.

5.7 Conclusion

The purpose of this chapter was to determine the characteristics of PLR and to ascertain if it is possible to find a negotiated position within the academic research context. Related to this was the identification of an appropriate research paradigm that is equipped to underpin and guide the execution of PLR.

It was established that research in the creative disciplines was introduced into a number of diverse educational and institutional settings, both nationally and internationally. Creative practitioners regard creative practice as central to their research. Consequently, the most pressing concern is how creative production and the artefact can be integral to and integrated into the research process and findings.

As is evident from the discussion, a multitude of terms are used to describe research in the creative disciplines. However, in the context of this study, PLR is the preferred term and is viewed as an activity located within the academic domain. Consequently, PLR occupies a negotiated position within this context. PLR results in contextualised creative practice. This involves the combination of the creative process, the artefact and a textual explication. It is an amalgamation of tacit and explicit knowledge modalities, which presents a holistic picture of the phenomena being explored. PLR is a self-reflective activity on artistic production in which the insider perspective of the creator is central to the understanding of the research outcomes. Tacit knowledge, which is gleaned from personal, experience, prior learning, skill and the application of intuition and is informed by and integrated with theoretical constructs, is a valuable source of knowledge and helps guide this intuitive journey of discovery. Consequently, knowledge in the creative process is embedded in personal action and reaction; in this context the practitioner is the agent of change who responds to feedback from the situation.

This negotiated position has to value and accommodate creative practice and the related reflective practice as a fundamental component of research in the creative disciplines, which brings us to positioning PLR within the academic research context and ascertaining the compatibility of PLR with the participatory paradigm.

The following generic research criteria were used to establish the position of PLR in the academic context. These criteria were, as stated: whether it can be framed as a systematic investigation; conducted intentionally; to gain new knowledge, which is communicated and disseminated for justification.

In terms of a systematic investigation, research in the creative disciplines is viewed as a journey of discovery, often without a predetermined hypothesis and which, for the most part, progresses from the “unknown to the known” as opposed to conventional research, which progresses from the “known to the unknown”. As a result, a predetermined methodology is often a hindrance as the direction and the creative process determines the method of study. However, it is possible to utilise research methods such as the Creative Production Cycle to guide PLR. Models of this kind take the serendipitous nature of PLR into account. They provide a structural approach for reflective contextualised chains of reasoning in relation to the creative production.

PLR is conducted intentionally and establishing a research question is considered relevant in this context. However, the research question should not enslave and limit the creative possibilities that may occur. In PLR it is often more viable to establish a research theme, rather than a specific question. Positioning this research intention within the participatory paradigm accommodates a more open-ended research approach. It acknowledges the utilisation of the unpredictable proximal knowledge dimension.

In terms of acquiring new knowledge, the contribution that PLR is able to make is in bridging the gap between traditional propositional research and creative practice.

Knowledge in this context is viewed as a holistic concept incorporating both the tacit and explicit knowledge dimensions. Therefore, PLR is positioned within the participatory paradigm and utilises its extended epistemology by means of reflective practice. Accordingly, the experiential, tacit dimension is made manifest as practical, experiential and presentational knowledge that is contextualised as propositional knowledge and contributes to knowledge creation and the development of theory building.

In line with the above, the communication and justification of knowledge is linked to the ontological and epistemological foundations of the participatory paradigm. The tacit dimensions are explicated by means of practical, experiential and presentational knowledge, while the propositional dimension is communicated and justified in textual / written terms. In this context, the reflective process of making, the final creative product and textual explication, form a comprehensive picture of knowledge. This type of knowledge often requires the utilisation of multimodal knowledge sources such as drawing, video, sound, visual journals or a combination of these. The way that knowledge is communicated and justified is determined by the nature of the particular investigation.

Additionally, collaboration and collaborative knowledge accumulation, sharing and knowledge creation by means of inter subjective inquiry, is the cornerstone of this paradigm. As discussed in Chapter two, practice-led research is often a collaborative activity in which research partnerships are formed to explore a theme from different perspectives. Chapter two also discusses multi-practitioner arts-related PLR projects conducted at the NWU as collaborative activities, which could also be located within the participatory paradigm.

Therefore, for the purpose of this study, PLR is located in the situated position within the academic context. In this context, PLR needs to maintain a link to traditional research but reframe aspects thereof to preserve the specificity of creative practice.

In light of the above it still needs to be determined if the TOKC is a compatible knowledge management approach for multi-practitioner arts-related PLR projects. The

next chapter is therefore concerned with the notion of knowledge management and the TOKC.

CHAPTER SIX: THEORETICAL EXPOSITION OF ORGANISATIONAL KNOWLEDGE MANAGEMENT**6.1 Introduction**

In Chapters four and five, investigation of the participatory paradigm was addressed as being a possible appropriate research paradigm for practice-led research (PLR) in the university context. Both PLR and the participatory paradigm recognise and utilise tacit knowledge and reflective practice, which were discussed in Chapter three. It may thus be stated that it is possible to communicate a non-reductionist picture of knowledge that includes both explicit and tacit knowledge dimensions. From a holistic perspective, these knowledge formats are comprehensively supported by the extended epistemology of the participatory paradigm and achieved through indwelling, reflective practice, multimodal communication and social interaction.

This Chapter discusses the investigation of the possibility that PLR, as a research format compatible with the participatory paradigm and the theory of organisational knowledge creation (TOKC), might share the same paradigmatic foundations. This aim is addressed by providing a contextual overview of the conceptual development and functioning of the TOKC. This is necessary because, in order to use the TOKC to manage multi-practitioner arts-related PLR projects, they need to be paradigmatically compatible. Therefore, this Chapter explores the epistemological, ontological and methodological correlations between the TOKC and the participatory paradigm, in order to substantiate further discussions.

The Chapter comprises three main sections. Section one serves as contextual background to orientate the reader to the history and conceptual evolution of the TOKC. Fundamental concepts, such as the SECI³² modes, knowledge assets³³, *ba*³⁴, and management styles, are introduced. In section two, the ontological, epistemological and

³² As mentioned in Chapter one, the SECI modes consist of four knowledge conversion processes: socialisation: tacit to tacit conversion: externalisation: tacit to explicit conversion: combination: explicit to explicit conversion and internalisation: explicit to tacit conversion: (Nonaka, 1994:18; Nonaka *et al.*, 2006:1182).

methodological dimensions of knowledge, as they relate to the application of the TOKC, are discussed. Correlations are drawn between the TOKC and the conceptualisation of knowledge as applicable to PLR and the participatory paradigm presented in Chapters four and five. In the third section, the critiques levelled at the TOKC are presented. These are discussed in order to ensure a critical application of the TOKC. Finally, a summation of the arguments and conclusions is presented.

6.2 Contextual background to the theory of organisational knowledge creation

Generally speaking, management may be split into two schools of thought, a scientific approach (management science) and a more humanistic approach (the human relations movement) (Schön, 1983:236-237; Nonaka & Toyama, 2007:372). This split corresponds to the separation of the subject and object, or mind and body, prevalent in Cartesian thinking. It also bears similarities to positivism's narrow understanding of empiricism as a method of scientific research, stemming from the physical sciences, discussed in Chapter three.

6.2.1 Management: Scientific management

Capitalist scientific management of the first half of the twentieth century was not an isolated phenomenon. It was very much in tune with technological rationalism and the positivist *Zeitgeist* of the time. Management science came to systematic fruition with the development of Taylorism, which was conceptualised between 1880 and 1890 by Frederick Winslow Taylor (1856-1915) and exerted its major influence in the USA between 1910 and 1920. Taylorism was instrumental to the promotion and

³³ Knowledge assets are the existing and developing stock of knowledge within an organization. Knowledge assets are both physical and intangible. As such, the SECI modes can utilise knowledge assets in the knowledge creation and conversion process (Nonaka *et al.*, 2008: 42).

³⁴ *Ba* is the Japanese word for space and refers to the different spaces in which knowledge creation and conversion can occur (cf. Nonaka & Konno, 1998:40; Nonaka *et al.*, 2008:36). *Phronesis* refers to the leader's ability to synthesize general universal knowledge with the practical knowledge of the particular situation to make decisions that guide the organization to the envisioned goal. (Nonaka & Toyama, 2007:379).
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dissemination of capitalism in a rapidly expanding capitalist society. In short, Taylorism was the application of scientific principles to the production and management process. This meant analysing production and workflow in order to transform craft production into mass production. Taylorism was, in essence, the systemisation of the mass production processes that started during the industrial revolution. It continued the process of gaining control over and disempowering the labour force. Although the process of controlling labour forces was not a new concept, Taylor developed it to a new, systematic level (Cooper & Taylor, 2000:559).

As stated in Chapter three, from a Marxist perspective, workers' involvement as part of the production process was reduced to a limited function, which did not require specific skills or an understanding of the process as a whole. Taylorism is regarded as a further development of the pre-capitalist systems of slavery and feudalism. These were abusive and were characterised by the exploitation of the working class (Hoppe, 1990:80). Therefore, capitalism and, by implication, Taylorism continued the class struggle between the small but powerful group of business owners and their larger disempowered workforce. Production and business were managed and the subjective knowledge of craftsmen was analysed to the point that it became a reductive movement or an action anyone could perform. Workers were exploited, as they become cogs in a machine that can be easily replaced and thus have no bargaining power (cf. Chapter three). The labour value of the worker was reduced to the production of more surplus value for the capitalist, which equated to more profit (Woodfin & Zarate, 2004:51-54). In this sense, the knowledge of the individual is negated and the commodities are not simply the actual products of labour; the worker came to be viewed as a commodity too (Steiner, 2004:9). Commodities are the indicative embodiment of the product of labour, which is labour itself. Once labourers realise the objectification of labour, they experience estrangement and alienation (Steiner, 2004:10).

As may be recognised in the above, three basic principles guided Taylorism (Cooper & Taylor, 2000:560-561). The first principle is to disassociate the process of labour from the process of skill, in other words to analyse the traditional knowledge of the

craftsperson, in order to break it into small, uncomplicated tasks that could be performed as a mass production process. Secondly, managers should take total control of the planning and thinking process. Hence, all the rational planning, brainstorming, decisions and other rational activities were taken out of the hands of the workers who then became functional task executers. Thirdly, all the activities of the workers must be planned in advance and communicated to them by management. This included the task, method and time allocation.

All of the above activities are typical of the capitalist system that Marx predicted would lead to alienation and dissatisfaction of the labour force (Woodfin & Zarate, 2004:64-65). As if to prove Marx's theory, Taylorism, in its strictest sense, had waned by the 1930's, due to the workers' dissatisfaction with their state of alienation and disempowerment. However, many of its concepts were embraced and given impetus by the production needs and technological programmes of the Second World War. Consequently, thought patterns of logic, rationality and empiricism in service of instrumental and profit driven efficiency remained and became entrenched. This resulted in the development of practices such as mass production processes and systems, data analysis, information processing, mechanisation, elimination of waste and standardisation of best practices that still thrive in today's industry and management practice.

Cooper and Taylor (2000:558) state that, although Taylorism is viewed as a redundant theory, it persists in contemporary management practice in terms of centralised control (top-down control), reduction of skills levels and the negation of personal craft in pursuit of mechanistic efficiency. It is clear that the persistence of Taylorism together with the central premise of top-down hierarchical control, which negates the contribution of the individual, is problematic in the reflective practitioner and knowledge creation contexts (cf. Nonaka & Takeuchi, 1995:8; Nonaka & Toyama, 2007:372).

6.2.2 Management: Human relations management

The human relations movement, in the context of management theory, was primarily developed by Elton Mayo (1880-1949), an Australian psychologist, sociologist and

organisation theorist, who was a professor of industrial research at the Harvard Business School from 1926 to 1947. Mayo's thinking was in direct opposition to Taylorism, because he viewed the individual as a valued member of the organisational group, as a social person who should be treated with dignity and respect and viewed as a valuable organisational resource (Anteby & Khurana, 2014).

The seminal study that leads to the conceptualisation of human resources management was the Hawthorne study (1924-1932) conducted by Mayo and his colleague Fritz Roethlisberger (1898-1974). This study was conducted over a nine-year period at the Western Electric Company, Hawthorne Works, on the outskirts of Chicago, and initiated a shift from the scientific management of Taylorism to human relations management. Within this study, working conditions that impacted on motivation and self-actualisation were identified as important factors for improving productivity.

Mayo's notion that scientific management and human resources management could be integrated, has had widespread influence on management theories. As a result, subsequent management theories have been concerned with finding a balance between scientific, technological and human relations management approaches. The TOKC proposed by Nonaka *et al.*³⁵ is viewed as a model that finds a balance between scientific management and human resources management. The TOKC is relevant in that it focuses on the creation of knowledge, which is also the function of research in an academic context. Additionally, it focuses on the conversion of tacit to explicit knowledge by means of social interaction, considered appropriate for multi-practitioner practice-led projects in the context of this study. This is because, when managing a PLR project, the notion of tacit knowledge, embodied in the individual's experience, is central and essential to the research. It would seem that in the preceding history of managerial theory, the bodily, tacit aspect of knowledge was negated, and it is for this reason that Nonaka *et al.* build on the concept of reflective practice as articulated by Schön. Nonaka

³⁵ As stated in Chapter one, when Nonaka *et al.* (without a specific year) is used in the text, the reference refers to the collective writings of Nonaka, in collaboration with other authors, over the period 1995 and 2009.

argues that the TOKC is a novel and valuable perspective. Nonaka and Takeuchi state:

We conclude that none of the thinkers has articulated the dynamic notion that human beings can actively create knowledge to change the world, implicitly suggesting that our view of knowledge and theory of organizational knowledge creation provides a fundamentally new economic and management perspective that can overcome the limitations of existing boundaries by the Cartesian split (Nonaka & Takeuchi, 1995: 32).

Both Schön and Nonaka prioritise the human relations movement due to its recognition of the individual and individual knowledge. This is what makes tacit knowledge and reflexive practice useful to Nonaka and Takeuchi (1995:32), who are in accord with the distinction identified by Schön. They further state that:

Western management thought can be seen as repeated challenges against the “scientific” view of knowledge by the “humanistic” one. This history reflects the entire effort of Western philosophy in the past two centuries to overcome the Cartesian split between the knower and the known (Nonaka and Takeuchi, 1995:32).

Nonaka and Takeuchi (1995) find this over-emphasis on explicit knowledge in the Western tradition problematic. In the development of the TOKC, they draw on the Japanese tradition and current Western philosophical trends that view the tacit dimension as equally important (Nonaka *et al.*, 2008:7; cf. Chapter three). Schön therefore correctly regards technical rationality, which is related to scientific management, as problematic within this context because it prioritises scientific empirical knowledge over practical, tacit knowledge gained from practical experience and reflection-on-action. With reference to the technical rationality approach, professionals have increasingly made claims of extraordinary theoretical knowledge based on scientific inquiry and have used these to secure social control and positions of power (Schön, 1983:5). However, as mentioned in Chapter three, the post-World War I and II critiques of the scientific professionals’ inability to solve real world problems allowed for the acceptance of a more humanistic management approach.

Because the professionals attempt to apply theory to these situations, Schön (1983:14) highlighted a mismatch between their claim to knowledge that would solve these

problems and the complexity, uncertainty, instability and uniqueness of real, practical situations, which were not solved by the knowledge of the professional. Schön (1987:6) postulates that understanding and reflecting on the intermediate zone of practice can solve this mismatch. Reflective practice is the process of reflection in the intermediate zone:

These indeterminate zones of practice – uncertainty, uniqueness, and value conflict – escape the canons of technical rationality. When a problematic situation is uncertain, technical problem solving depends on the prior construction of a well-formed problem - which is not itself a technical task. When a practitioner recognizes a situation as unique, she cannot handle it solely by applying theories or techniques derived from her store of professional knowledge. And in situations of value conflict, there are no clear and self-consistent ends to guide the technical selection of means (Schön, 1987:6).

Therefore, purely theoretical knowledge cannot always solve problems and the recognition and awareness of potential for the conscious process of reflecting in, or on, action to contribute to new knowledge and the development of theory, is important.

6.3 The basic premise of the theory of organisational knowledge creation

The TOKC advocates that individual tacit knowledge may be amplified and enriched by, and converted to, explicit knowledge, by means of social interaction, which will benefit the whole organisation (Nonaka, 1994:14; cf. Chapter one). In this context, the success and knowledge generated by an organisation is predicated on the development of individual participation as opposed to a static stock of information (Gray & Densten, 2005:594).

At this juncture, it is necessary to emphasise the distinction between knowledge and information within the TOKC context, as it underpins the individual's role in the knowledge creation cycle. Information refers to isolated facts or objective content, while knowledge refers to facts that are contextualised and understood in relation to other facts, bodies of knowledge and social contexts (Nonaka & Takeuchi, 1995:58).

In the knowledge creation cycle, individuals engage in a process of contextualising and understanding information and knowledge from a personal stance, in collaboration with others, to address a particular organisational need. This is predicated on the notion of reflective practice and the related concepts of reflection-in-action and reflection-on-action (Schön, 1983, 1987; cf. Chapter three).

In congruence with PLR, reflective practice in the TOKC context is regarded as a conversation between the situation, problem or project and the self or team. In this way, individual experience and knowledge are utilised in the knowledge and theory development process. Knowledge creation, in this sense, is similar to that which occurs in PLR when creative practice, which may be considered the personal dimension, is historically or theoretically contextualised (cf. Borgdorff, 2011; Farber & Makela, 2010; Mäkelä & Routarinne, 2006; Gray & Marlins, 2004; Douglas *et al.*, 2000).

The knowledge creation process involves selecting, self-organising teams (also known as fields of interaction), composed of various individuals who have the ability and technical and/or theoretical knowledge to contribute to the creation of new products or resolve a specific problem.

This team may represent various aspects of the organisation and is often autonomous and temporary in nature (Nonaka & Von Krogh, 2009: 648). This is similar to the notion of reflective practicums as collaborative groups engaged in activities designed to investigate and find resolutions for a specific problem or project (Schön, 1987:38; cf. Chapter three).

However, self-organising teams address real issues and do not function in a virtual context, as is the case with reflective practicums. Typically, the teams are selected by middle managers, but may also be independently created. In the business context, the types of projects that teams work on are informed by the organisational vision and objectives.

In the knowledge management context, self-organising teams utilise internal knowledge assets and knowledge as well as knowledge conversion/creation mechanisms (such as the SECI modes) in the execution of their tasks. Accordingly, knowledge is viewed as both a resource and an asset; in this respect the TOKC facilitates and promotes creativity, change, and innovation to gain a competitive advantage (Nonaka & Takeuchi, 1995:3-4; Nonaka & Von Krogh, 2009:644). Knowledge is therefore intangible, borderless and dynamic, according to the TOKC. If this resource is unharnessed at the particular time or place at which it appears, it can become either meaningless or is lost altogether (Nonaka & Konno, 1998; Nonaka *et al.*, 2000; Schütt, 2006). Therefore, mechanisms such as the SECI conversion modes are required to facilitate the effective utilisation of individual knowledge.

6.3.1 The conceptual development of the theory of organisational knowledge creation

It was not until the 1990's, that Nonaka (1994) made a significant departure from hierarchal economic rationalism to a new knowledge-based theory of the organisation. According to Nonaka and Takeuchi (1995:6-7), the realisation that knowledge is a new competitive resource was recognised by authors such as Toffler (1990) and Drucker (1968). Drucker, in particular, referred to knowledge as *the* resource rather than a resource and states that the "knowledge worker" is the ultimate asset to any company. Included in his definition of a knowledge worker, is a knowledge executive who knows how to utilise knowledge most efficiently to extract the most productive use from it, just as the capitalist knows how to allocate capital in order to obtain the most productive results (Nonaka & Takeuchi, 1995:7; Stenmark, 2000:1).

Economic rationalism, which has its roots in Taylorism, views individuals as expendable; furthermore, because their jobs have been reduced to eliminate artistry and skilful functioning, they are also not seen as proprietors of knowledge. In this scenario, the terms knowledge and information are interchangeably used; the organisation is regarded as an information processing "machine," that prioritises explicit knowledge (Scharmer in Von Krogh *et al.*, 2000:42). According to Jakubik (2007:12-13), in this

commodity-view of knowledge, knowledge is considered a static organisational resource or commodity. In this sense, knowledge is an objective, definable commodity and often corresponds to the notion of gathering data and or information rather than knowledge. This approach is also referred to as the “product-centred” or the “codification” approach.

The typical management style associated with economic rationalism is the hierarchical top-down management style, which prioritises the top and manages the vision and the uniform implementation thereof. Top management’s vision becomes the operational imperative for middle managers and this vision is systematically filtered down the chain of command. The individual perspective is ignored or suppressed by systems and routines in pursuit of economic rationality or functionality. In this scenario, the focus is placed on problem solving, rather than knowledge creation. Information moving from the top-down is generalised and is often transformed or used to create routines that allow individuals to process large amounts of information quickly. Information moving from the bottom-up commonly consists of specific statistics or data (Nonaka, 1994:30). This management style does not, and is not suited to, promote creativity, innovation or knowledge creation (Nonaka *et al.*, 2000:22). Consequently, any management style associated with economic rationalism would be inappropriate for the management of PLR projects.

However, Nonaka *et al.* developed the TOKC, offering an alternative management approach to the economic rationalist approach. Nonaka (1994:34) adopted a more “humanistic” notion of knowledge that includes aspects such as human experience, emotion, intuition and the acquisition of skills. This “humanistic knowledge” relies on the conceptualisation of and epistemological distinction between tacit and explicit knowledge, as proposed by Polanyi (1962; 1966a; 1966b; cf. Nonaka & Takeuchi, 1995:59-60; Nonaka *et al.*, 2008:18; Schütt, 2003:452; Gourlay, 2002:1/3; Brătianu, 2010:673). As a result, Nonaka and Takeuchi (1995) concur with Polanyi (1966b:20) who believed that the aim of modern science to establish a strict, detached and objective knowledge has failed and that any attempt to eliminate the personal element from knowledge is, in fact, self-defeating and results in the destruction of all knowledge.

It can therefore be stated that the conceptualisation of knowledge shared by Polanyi (1958, 1962, 1966a, 1966b), Schön (1983, 1987), Nonaka (1994), the participatory paradigm and PLR stem from the same philosophical stream. Nonaka *et al.* sum it up as follows:

Our view of knowledge and the knowledge creation process is people centered, action-orientated, and rooted in the philosophical traditions of Nishida in the east, and Aristotle, Polanyi and Whitehead in the West, all of whom explain the nature of knowledge and human existence in an ever-changing, interrelated world (Nonaka *et al.*, 2008:7).

Therefore, in terms of PLR and the TOKC, knowledge is not viewed from the objective positivist paradigm that only values explicit knowledge. Rather, knowledge is viewed as a combination of the tacit and explicit knowledge dimensions. As such, personal experience, skill, intuition and explicit knowledge are explored in a continually evolving, interrelated world, to gain a holistic picture of knowledge.

The TOKC has been widely accepted and adopted in the business context as well as by theorists working in the field of knowledge management, *inter alia*, Glisby and Holden (2003), Rice and Rice (2004), Schütt (2003); Kriener (2002) as well as Brătianu and Orzea (2009). The reason for this acceptance is that the TOKC represents a significant departure from a dehumanising, profit-driven economic rationality, which was, and in many cases still is, the focus of Western managerial models and theories (Nonaka, 1994:14; Scharmer, 2000:43).

The TOKC was introduced in 1994 and has since undergone significant developments and adaptations; an overview of which is offered in the next section. The aim of this section is to briefly discuss the development of the TOKC and introduce the knowledge conversion mechanisms that will be elaborated on in Chapter seven.

Nonaka *et al.* have, over the last twenty years, critically evaluated and adapted the TOKC. The realisation that tacit knowledge is difficult to encapsulate facilitated the creation of a flexible and fluid management approach. This new approach demonstrated how intellectual capital and the sharing of knowledge within the organisation could lead

to innovation (Nonaka *et al.*, 2008: xi). In this sense, individual tacit knowledge is viewed as a valuable source of knowledge that can be converted into explicit forms which will benefit the entire organisation (Nonaka, 1991; Nonaka, 1994; Nonaka & Takeuchi, 1995: cf. Clawson, 1996:7-8). It is contended that a flexible management approach that prioritises both tacit and explicit knowledge is what makes it appropriate to the PLR context.

The TOKC was brought about by the realisation that when faced with market related economic challenges, Japanese companies utilise organisational knowledge creation in a distinctive way to move into new unexplored territories. This is due to the group orientation of Japanese society and its members' willingness and ability to use collective experience to solve problems; an aspect that will be explored further in a discussion of the ontological dimension of the TOKC. Thus, living in uncertain and changing business environments has favoured Japanese companies since they display an attitude that aids the abandonment of the old in search of more relevant ideas, products and systems.

In such unpredictable business environments, the utilisation of knowledge both internally and externally results in knowledge creation, which, in turn, leads to innovation and, ultimately, a competitive advantage. Japanese companies have long recognised that knowledge is one of their most valuable resources and regard the state of "change" as a routine business operation (Nonaka & Takeuchi, 1995:4-5). Consequently, two factors have influenced the development of the TOKC. The first is the comprehension that Japanese companies were successful in the international arena, due to their ability to harness skills and expertise and create organisational knowledge (Nonaka & Takeuchi, 1995:3). The second is the acknowledgement that, when living in a knowledge society, the ability to create knowledge should be seen and utilised as a competitive advantage (Nonaka, 1994:14; Nonaka & Takeuchi, 1995:7; Jakubik, 2007:6).

The initial development of the TOKC (1994-1998) focused on the conceptualisation of the SECI modes. As mentioned earlier, these modes were designed to assist in creating, stabilising, capturing and facilitating knowledge conversion and creation. In this

model, tacit and explicit knowledge interact in four different ways or modes: socialisation (tacit to tacit conversion), externalisation (tacit to explicit conversion), combination (explicit to explicit conversion) and internalisation (explicit to tacit conversion) (Nonaka, 1994:18; Nonaka *et al.*, 2006:1182). These modes or processes, which are discussed in more detail in Chapter seven, constitute the mechanisms that facilitate the conversion of existing knowledge into new knowledge. This process is driven by means of social interaction and was visualised by Nonaka as follows:

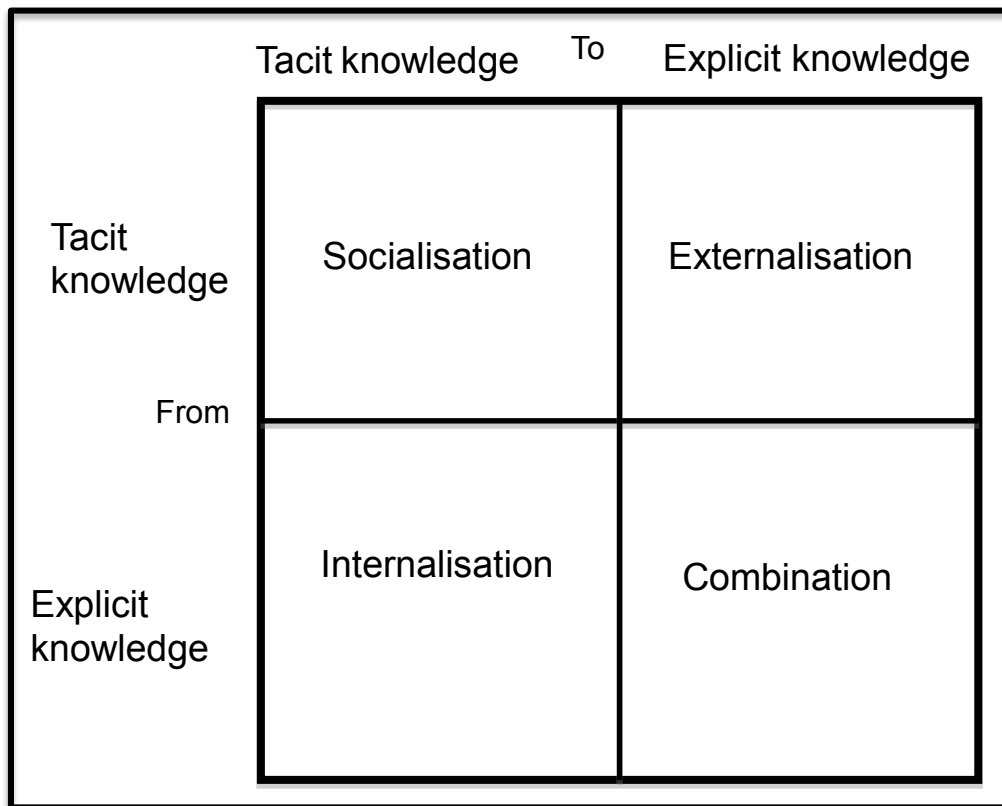


Figure 7: Modes of knowledge creation (Nonaka, 1994:20)

A selected self-organising team thus moves through the socialisation, externalisation, combination and internalisation cycles in order to solve a problem or develop new products.

Although this initial phase represents a significant departure from economic rationalism, Nonaka and Konno (1998) argue that knowledge had been too narrowly conceptualised

in this version of the modes of knowledge creation. The dynamics, complexity and variety of social interaction during the knowledge creation process needed more consideration. Therefore, they introduced the notion of *ba*, which is a Japanese word that means “space”; specific *ba* (spaces of interaction) were then linked to specific SECI modes. In other words, Nonaka and Konno (1998) introduced the concept of *ba* into the TOKC in order to explicate social interaction more comprehensively.

To elaborate, *ba* is a frame of space and time in which knowledge is a resource for knowledge creation. Space, in this context, can be physical office space, virtual space (e-mail, teleconferencing, Skype), mental space (shared experiences and ideas, brainstorming) or a combination of these. *Ba* is considered a transcendental space that recognises the self in all and which supports and encourages emerging relationships. (Nonaka & Konno, 1998:40; Nonaka *et al.*, 2008:36). The *ba* serves as a platform for knowledge creation by concentrating resources at specific points (space and or time) in order to distil the knowledge base of individuals and groups by means of social interactions. Both the *ba* and the SECI modes are complementary processes that interact with each other to facilitate different stages of the knowledge creation process. Nonaka and Konno (1998) present two diagrams that show how social interaction in the knowledge creation process has been visualised.

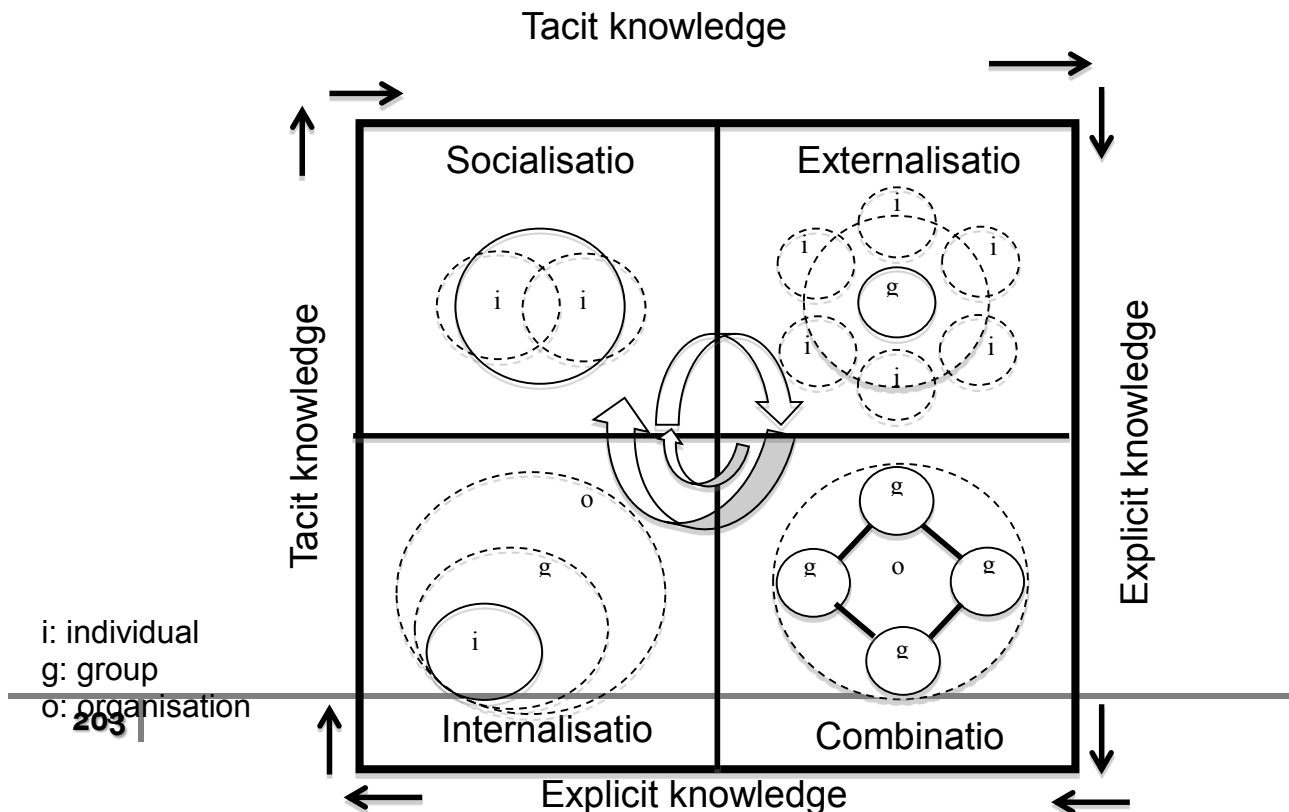


Figure 8: Spiral evolution of knowledge conversion and self-transcending process (Nonaka & Konno, 1998: 43)

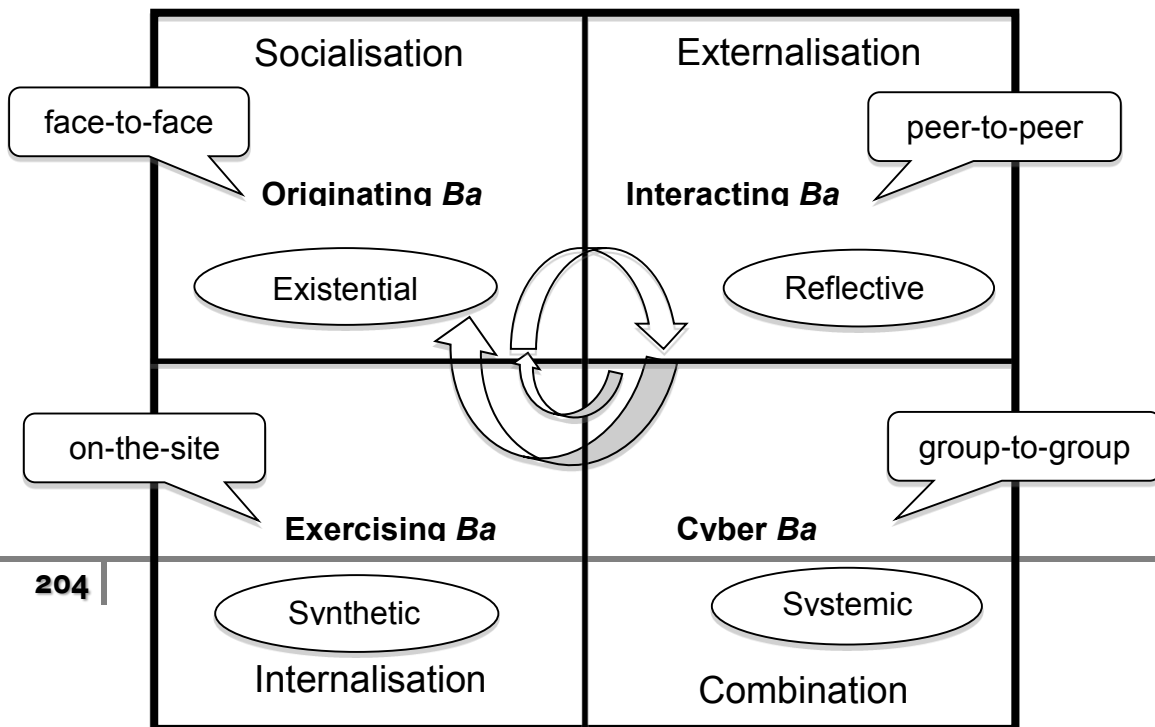


Figure 9: Four characteristics of *ba* (Nonaka & Konno, 1998: 46)

By comparing the Figure 7 (Nonaka, 1994:20) with Figure 8 (Nonaka & Konno, 1998:43), it becomes evident that the notion of social interaction has been more carefully considered in the later version. Additionally, Figure 9 (Nonaka & Konno, 1998:46) demonstrates how the SECI modes and *ba* are interrelated and interact. The introduction of *ba* is what has made this theory applicable in the organisational context. Following these principles, organisations can create *ba* that are context specific. Niedderer and Imani (2008) contend that the SECI modes and the related *ba* are useful tools concerning knowledge creation in the PLR context. These SECI mode and *ba* are associated with the different stages of research and help the researcher/practitioner to understand and manage the knowledge dimensions within each stage. It should be noted that Niedderer and Imani (2008) considered this method within the context of individual research and not in a group context. For example, combination in this context could entail the researcher/practitioner combining and reconceptualising explicit knowledge, which they have created employing other explicit knowledge.

In 2000, Nonaka *et al.* introduced the notion of knowledge assets in order to utilise the existing and developing stock of knowledge within an organisation. In this context, the utilisation of organisational knowledge is viewed as an important competitive advantage. Due to the tacit nature of knowledge, knowledge assets are difficult to define and are often dependent on the context and organisation. These assets, such as knowledge itself, are in a constant state of dynamic flux. In order to maximise the use of knowledge,

they must be customised and used to suit the specific context (Nonaka *et al.*, 2000: 21). Knowledge assets are both physical and intangible; the knowledge conversion mechanisms (SECI and *ba*) are used to convert knowledge and information to add value (Nonaka *et al.*, 2008: 42).

The importance of such assets is revealed in the process of stocktaking and the organisation-specific utilisation of knowledge. Nonaka *et al.* (2000:21) postulate two components to knowledge assets; namely, structural capital and human capital. They also propose four categories: (i) experiential knowledge assets, (ii) conceptual knowledge assets, (iii) systemic knowledge assets and (iv) routine knowledge assets. The table below gives an explanation of the four knowledge asset categories. It should be noted that knowledge assets and the way the specific dimension interacts with the other knowledge conversion mechanisms such as the SECI modes and *ba* are discussed in detail in Chapter seven.

<p>Experiential Knowledge Assets</p> <p>Tacit knowledge shared through common experience</p> <ul style="list-style-type: none"> • Skills and know-how of individuals • Care, love, trust, and security • Energy, passion, and, tension 	<p>Conceptual Knowledge Assets</p> <p>Explicit knowledge articulated through image, symbols, and language</p> <ul style="list-style-type: none"> • Product concepts • Design • Brand equity
<p>Routine Knowledge Assets</p> <p>Tacit knowledge routinized and embedded in actions and practices</p> <ul style="list-style-type: none"> • Know-how in daily operations • Organisational routines 	<p>Systemic Knowledge Assets</p> <p>Systemised and packaged explicit knowledge</p> <ul style="list-style-type: none"> • Documentation, specifications, manuals

<ul style="list-style-type: none"> • Organisational culture 	<ul style="list-style-type: none"> • Database • Patents and licenses
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Figure 10: The four categories of knowledge assets (Nonaka et al., (2000:20)

In the final conceptualisation of the TOKC, the SECI modes, *ba* and knowledge assets interact to contribute to the knowledge creation process.

Nonaka and Toyama (2007) introduced the notion of phronesis, which is concerned with leadership. Phronesis is the ability to make the right decision at the right time for the betterment of all concerned. It is an imaginative act of creating the future of an organisation by envisioning and working towards a specific goal. This goal is formulated with the aid of experience, practical skills and the shared judgment of others. In other words, leaders must have the ability to synthesise general universal knowledge with the practical knowledge of the particular situation, in order to make decisions that guide the organisation towards the envisioned goal (Nonaka & Toyama, 2007:379). However, phronesis is not considered a knowledge conversion mechanism or process and, as such, will not be discussed in terms of the knowledge conversion modes presented in Chapter seven.

In terms of management style, Nonaka (1994:32) advocates the implementation of the middle-up-down style for the TOKC. In the middle-up-down management style, middle managers are viewed as the “knowledge engineers” of the knowledge creating organisations. Both top and lower management perspectives inform the middle managers’ vision. Therefore, middle managers’ bridge the gap between the top management’s vision/dream and the reality of the lower managers. It is a process that allows knowledge creation to take place simultaneously and collaboratively on the top, middle and lower managerial levels. Middle managers translate the vision of top managers into middle range visions that are realised through self-organising teams or groups of interaction. This process helps to formalise the relationship between people from different backgrounds, perspectives and skill levels. The team provides a shared

context for experience and trust while focussing members on the task at hand (Nonaka, 1994:19). In this sense, diverse points of view are accommodated while the managerial process is concerned with participation, team building and problem solving. Reflection-on-action and reflection-in-action as conceptualised by Schön (1983) are vital tools in this management process (Nonaka & Takeuchi, 1995, 232). The notion of shared responsibility, interaction and vision counteracts the managers' fears of appearing incompetent. Thus, the middle manager takes on the role of manager teacher, mentor and facilitator of knowledge. The different styles are listed in Table 3 below.

Table 3: A comparison of three management models (Nonaka, 1994: 32)

	Top-Down	Middle-Up-Down	Bottom-Up
Agent of knowledge creation	Top managers	Self-organising teams (with middle managers as team leaders)	Entrepreneurial individuals (entrepreneur)
Resource allocation	Hierarchical	“From diverse viewpoints”	Self-organising principles
Pursued synergy	“Synergy of money “	“ Synergy of knowledge”	“Synergy of people”
Management process	Leader as commander Emphasis on information processing; chaos not allowed	Leader as catalyst Create organisational knowledge Create / amplify Chaos /noise	Leaders as sponsors Create personal information; chaos/noise permitted
Accumulated knowledge	Explicitly computerised and documented	Explicit and tacit, shared in diverse forms	Tacit, incarnated in individuals
Weakness	High dependency on top management	Human exhaustion; lack of overall control of the organisation	Time consuming; difficult to coordinate individuals

Although the TOKC is generally used in the business and organisational contexts, it is regarded as relevant in the management of multi-practitioner arts-related PLR projects due to its provision of a management model driven by social interaction for mobilising tacit and explicit knowledge. As mentioned, multi-practitioner arts-related PLR projects conducted at the NWU can be considered self-organising teams. In the context of these PLR projects, the project leaders, who are senior staff members, are considered the mid-level managers within a middle-up-down management structure in that they balance the institutional research requirements with the desire of practitioners to produce creative work. Conversely, the dominant logic that normally recognises purely textual output is challenged, as the artefact is considered an integral part of the communication and dissemination of PLR. This mobilisation of knowledge is similar to that of PLR in the academic milieu, which generally commences with tacit knowledge that is subsequent discussed in explicit terms.

As stated earlier, the primary aim of this Chapter is to determine the compatibility of the TOKC and PLR on the basis of paradigmatic similarity. The contextual and conceptual understanding of the TOKC presented above is in line with this aim. A more detailed discussion of the knowledge conversion mechanisms is presented in the next section.

6.4 The ontological, epistemological and methodological dimensions of the theory of organisational knowledge creation

Chapters four and five established that the participatory paradigm is one that accommodates and facilitates the needs and characteristics of PLR. In order to utilise the TOKC to manage multi practitioner arts-related PLR projects, it is necessary to ascertain whether this theory shares the same paradigmatic foundation as PLR. Accordingly, the next section will explore the ontological, epistemological and methodological aspects of the TOKC and relate them to the participatory paradigm.

6.4.1 Ontological dimension

As stated earlier, Nonaka *et al.* have adopted a “humanistic” notion of knowledge that includes aspects such as human experience, emotion, intuition and skills level. In this regard they are in accord with the philosophical tradition of Nishida, Aristotle, Polanyi and Whitehead (Nonaka *et al.*, 2008:7). These theorists are generally referred to as process philosophers because they consider the world to be an organic web of interrelated processes and events. In this sense, human beings are viewed as complex spatio-temporal entities that purposefully act to realise their dreams and ideas. As such, they act and react to each other as well as their environment, and in doing so transform the self, the other and the environment. This conceptualisation of knowledge serves as the foundation for the development of the TOKC.

For Nonaka (1994:15) and Nonaka *et al.* (2008:9), knowledge is created by individuals and cannot exist or be created without human subjectivity, which is influenced by individuals’ interaction with their environment and worldview. This process entails actively integrating personal experiences in the realisation and creation of new knowledge. Therefore, knowledge in terms of the TOKC is perceived as a dynamic, socially constructed resource driven by social interaction. The ontological stance adopted by Nonaka *et al.* correlates with that of the participatory paradigm discussed in Chapter four. In correspondence with the above, the participatory paradigm advocates a subjective-objective ontology, which emphasises the mobilisation of personal, embodied experience and the verification and justification thereof through interaction with others. Knowledge is subjective and co-created from our own experiences and our interaction with the multiple perspectives of others. Therefore, knowledge is created when individuals interact with other individuals and groups in a co-inhabited environment (Heron & Reason, 1997:275-276).

Consequently, the traditional Western philosophy of the dualism of body and mind (and the “subjective” as a self-contained, stable centre of the universe), as discussed in Chapter three, is rejected (Stenmark, 2000:3; cf. Polanyi, 1966b:20). Rather, existence emerges as an integrated process situated in and through interaction with the world

(Nonaka *et al.*, 2008:10). Accordingly, Nonaka and Takeuchi (1995: 20-21) consider this dualistic Western view to be the reason why Western businesses focus on explicit knowledge. The result is that in the Western business context, learning is regarded as something performed with the mind.

In contrast, the development of the TOKC has been influenced by the Japanese intellectual tradition, which has not acknowledged rational thought to be of clear universality due to its resistance to the separation and objectification of the self and nature. The oneness of humanity and nature is a fundamental condition that underlies and characterises Japanese culture (Nakamura, 1967 in Nonaka & Takeuchi, 1995: 29: cf. Stenmark, 2000:3). This oneness of mind and body, which is at odds with the Western notion of the separation of mind and body, emphasises the wholeness of being. Knowledge and wisdom accumulated over time by means of personal and physical experience is valued over intellectual abstraction. Zen Buddhism is a major contributor to the notion of integrating the physical and mental to form a unified and conscious whole. For Nonaka and Takeuchi (1995), knowledge is derived from both thought and action and the accompanying awareness of both. Unifying that which is known by the body, and that which is known by the mind, implies that there are two kinds of equally important and inseparable knowing. Polanyi (1966a:3), with whom Nonaka *et al.* concur, has articulated these types of knowing as the focal and proximal knowledge dimensions, which are comprehended through indwelling. Polanyi (1958, 1962, 1966a, 1966b) is of the opinion that knowledge cannot be acquired by theoretical thinking alone but only through total oneness of mind and body.

Oneness of self and others is a natural progression or component of oneness of humanity and nature and oneness of body and mind. The Western idea of individual self-realisation is not the goal here. Rather, individual self-realisation is actualised as a harmonious part of the collective self. Japanese individuals thus understand and create themselves through others. Working with and for others is thus working for and with the self (Nonaka & Takeuchi, 1995:31).

In the context of knowledge management, knowledge is viewed as a subjective construct that can be of individual and collective benefit if effectively managed. Dialogue is a way of sharing ideas, concepts and experiences with others in which one is exposed to a variety of perspectives (that may differ from one's own). In this way, seemingly contradictory ideas and concepts can be synthesised. This often involves discarding presumptions in order to find new solutions. This process requires an environment of trust in which individuals need to employ both self-assertion and modesty. In other words, what is considered to be true differs from person to person and it is the constructive dialogue and interaction that influences the knowledge created and, by implication, the environment it is created in.

To summarise this section: ontologically the TOKC views knowledge to be inter-subjective, human centred and process-relational, which is created in practice. Knowledge is thus created by the sharing and justification of knowledge (inter-subjective) by individuals while dealing with particular situations or problems. Davenport and Prusak offer a concise definition that relates to the knowledge management context:

Knowledge is a fluid mix of framed experiences, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms (Davenport & Prusak, 2000:5).

In this context, and also for PLR, the focus is not on problem solving but rather on the utilisation of practice to create knowledge that will solve the problem or create a new product. Accordingly, knowledge foregrounds the utilisation of experience, insight, vision and intuition in the management of both predictable and unpredictable situations (Nonaka *et al.*, 2008:13-14; cf. Schön, 1987:60). The ontological foundation of the participatory paradigm views reality from an objective-subjective point of view in which reality is co-created by the mind and world (Heron & Reason, 1997:270-280, 289). This can be viewed as appropriate in terms of the TOKC.

PLR corresponds with the ontological underpinning of the participatory paradigm and the TOKC in that it values personal experience. As discussed in Chapter five, insight and intuition are fundamental research processes, which manifest and are contextualised in terms of the artist's repertoire and skilful interaction (Borgdorff, 2011:55). Reflective practice (cf. Schön, 1983; 1987) is central to PLR because it allows for a reflexive zone in which comprehension and knowledge creation can occur (Sullivan, 2011:100). This knowledge creation can occur as an individual or collaborative process. As such, the experiences of the past and the present are unified with our experiences of others, through which we become a new self. In this context, we are the sum of our experiences and this determines how we relate to the world. This correlates with the notion of the idiosyncratic dimension that utilises individual experiential, tacit knowledge to solve problems and gain insights (Munro, 2011:157-158; cf. Chapter five). Therefore, in both PLR and the TOKC, human experience and subjectivity are viewed as assets and resources that can be used to generate knowledge (Nonaka & Toyama, 2005:421).

Additionally, PLR is often conceptualised and conducted as a collaborative activity (Gray & Marlins, 2004:21; cf. Rust *et al.*, 2007: 51; Marley, 2012). This is a dynamic process, during which participants learn and develop skills through interaction with others (Marley & Greyling, 2010:175-176; Borgdorff, 2011:53). This is relevant in terms of this study because both the *Tracking Creative Creatures* (TCC) and the *Transgressions and Boundaries of the Page* (TBP) projects were conceptualised and conducted as multi-practitioner PLR collaborative research projects. As stated in Chapter one, the aim of these projects was to encourage both creative practice and related research within the disciplines involved. Therefore, they are regarded as collaborative group efforts, which have encouraged, promoted and facilitated research through art (attuned with PLR and the participatory paradigm) and research on art (which generally functions within the critical theorist paradigm). It should be noted that in terms of PLR, the theoretical knowledge held by the individual is viewed as an integral part of their experience and worldview and not as a separate entity. The fact that the TOKC is premised on a holistic notion of knowledge (Polanyi, 1966b:30) which encompasses reflective practice is the

reason that it is applicable in the PLR context. The epistemological stance adopted for the conceptualisation of the TOKC is the topic of the next section.

6.4.2 Epistemological dimension

As indicated, the epistemological stance of the TOKC is important since it represents a departure from the tradition of prioritising explicit knowledge in Western organisations. Nonaka *et al.* have adopted two fundamental principles with regard to the epistemological approach to the TOKC. Firstly, they have embraced the notion of tacit and explicit knowledge (and the utilisation thereof by means of reflective practice, as discussed in Chapter three). Secondly, Nonaka (1994:15) acknowledges the generally accepted definition of knowledge, “justified true belief”, as clarified in the following paragraphs.

Regarding the first principle, the recognition of the tacit and explicit knowledge as inextricably intertwined entities conceptualised by Polanyi (1962, 1966a, 1966b) is fundamental to the TOKC. In this context, Nonaka *et al.* concur with Schön (1983, 1987) in that cognition is informed by reflective practice, which involves dwelling in situations both individually and collaboratively. Nonaka (1994:17) and Nonaka *et al.* (2008:18) use the metaphor of an iceberg to visualise the relationship between tacit and explicit knowledge. In this visualisation, explicit knowledge is seen as the visible tip of the knowledge iceberg and may be easily communicated and transmitted by the codified systems of language. The fact that this dimension of knowledge is easy to communicate and control is due to what Nonaka and Von Krogh (2009:636) call the universal character, which is the capacity to work across contexts with limited ambiguity.

Tacit knowledge, on the other hand, is the more personal dimension of the knowledge equation and can be regarded as the unseen part of the iceberg, which is obscured by the surface of the water. This metaphor could also be interpreted as representing the focal dimension of knowledge (the visible part) while the submerged section of the iceberg relates to the proximal knowledge dimension as conceptualised by Polanyi (1962, 1966a, 1966b).

However, Nonaka and Takeuchi (1995:60) elaborate on the philosophical thinking posed by Polanyi, including a practical dimension, where they describe tacit knowledge as having a cognitive and a technical element. The cognitive element is a mental model formed in the individual's mind by negotiating various internalised elements, such as belief, theories, paradigms and schemata. The creating and manipulating of analogies from these elements forms a personal perspective and worldview. This worldview informs the individual's concept of reality and the vision of the future (Nonaka, 1994:16; Nonaka & Takeuchi, 1995:60; Nonaka & Von Krogh, 2009:642).

The technical dimension is the more hands-on practical, craft or skills element of knowledge. This is analogous to a master artisan who, after years of experience, has gained knowledge, which includes technical knowing and bodily experience, articulation of which is difficult. The know-how and learning-while-doing component that is more often than not utilised in service of the cognitive model, is an important dimension in the knowledge creation process (Nonaka, 1994:16; Nonaka & Takeuchi, 1995: 60).

In this context, the TOKC, in congruence with PLR, views explicit and tacit knowledge as complementary dimensions that supplement and balance each other in order to form a holistic picture of reality. The epistemological assertion of the TOKC is that both the tacit and explicit dimensions need to be communicated. Therefore, the extended epistemology of the participatory paradigm is viewed as relevant in this regard because it offers a more nuanced knowledge distinction that aids knowledge communication and dissemination. In this context, experiential knowledge, presentational knowledge and practical knowledge of the participatory paradigm relate to the tacit dimension while propositional knowledge is related to the explicit dimension. The correlation between the different knowledge dimensions of the participatory paradigms' extended epistemology and the knowledge conversion mechanisms of the TOKC is explored in more detail in Chapter seven.

As noted earlier, the second principle adopted by Nonaka *et al.* is the acknowledgment of the generally accepted definition of knowledge as “justified true belief”. The common understanding of this definition is that a proposition is believed to be true by the researcher or research community if this proposition can be justified by facts or evidence that support the proposition. In other words, a proposition may be regarded as true if the evidence supports this belief and it withstands the process of falsification. In this context, the emphasis is normally on truthfulness quantified in objective, absolute static and explicit forms. However, for Nonaka *et al.* the emphasis is not on truth or truthfulness, but rather on “justification” of personal beliefs as truthful knowledge. Nonaka and Takeuchi state that,

While traditional epistemologies emphasise the absolute, static, and nonhuman nature of knowledge, typically expressed in propositional and formal logic, we consider knowledge as a dynamic human process of justifying personal belief towards truth (Nonaka & Takeuchi, 1995:58).

This justification of personal belief should be understood in terms of the organisational situation and context. Personal belief is utilised with the aim of developing new products or addressing particular problems. The knowledge vision informs and is connected to the driving objectives, which manifest in concepts, goals and actions that facilitate organisational functioning and the knowledge creation process. The connection of the knowledge vision to the driving objectives is a knowledge creation process that needs to be consciously constructed in order to be effective. Justified personal belief is thus important in terms of the manner in which an organisation positions itself and determines how it should exist in the world (Nonaka *et al.*, 2008:13 cf. Nonaka & Toyama, 2005:424). In other words, the emphasis that Nonaka (1994:15) places on personal belief should be understood as belief that is contextualised and justified in terms of a larger organisational context. This is similar to the fact that the personal beliefs, which inform PLR, need to be contextualised in terms of university research requirements.

Nevertheless, the justification of knowledge in the managerial business context and the academic milieu differ because they have two distinct sets of criteria. Therefore, for the TOKC to be used in the PLR context, the justification of knowledge will need to be appropriately contextualised. Consequently, PLR projects conducted in the academic context should be informed by research aims and objectives, which act as a type of knowledge vision. Put differently, personal belief only becomes relevant in the organisational context if it has been discussed, contextualised and justified in terms of the knowledge vision of an organisation. In terms of PLR, this relates to the process of linking the idiosyncratic (personal knowledge and belief) to the domain (organisational context) and field (cf. Chapter four). However, the knowledge vision of the institution may still be influenced by traditional research criteria, which prioritise explicit knowledge. In this context, the negotiated position of PLR, within the academic context discussed in Chapter five, is well-suited to negotiate such a circumstance.

Understanding the ontological and epistemological congruence between the TOKC and PLR is necessary in order to establish a pertinent knowledge vision for multi-practitioner PLR projects. This is particularly so, as according to Fahey and Prusak (1998:265-266), one of the fundamental problems with respect to knowledge creation is not obtaining a clear understanding of the conceptualisation of knowledge. As stated in Chapter one, if PLR is to contribute to the academic context, the expectations of the formal research environment and the unique characteristics of the creative disciplines need to be balanced. Consequently, practitioners working within the university context must place creative practice on a more solid, rigorously formulated foundation (Sullivan 2005:26). This is particularly so in the South African context where PLR and multi-practitioner arts-related PLR projects are in an early stage of development. Marley and Greyling (2010:171-172; cf. also Marley, 2012:12) have argued that multi-practitioner PLR projects conducted at the NWU, Potchefstroom Campus have already contributed to building bridges between creative practice and research because of an understanding and consideration of the theoretical issues surrounding PLR. Therefore, identifying the relevant research paradigm, and understanding the ontological and epistemological

foundation within which one is functioning, are important in order to contribute to the development of PLR in the South African context.

In the sections above, the ontological and epistemological dimensions of the TOKC have been discussed. Additionally the correlation and compatibility between the TOKC, PLR and their foundations in the participatory paradigm are clarified. In the next section, the methodological approach, with regard to the utilisation of knowledge, is investigated.

6.4.3 Methodology

As mentioned in Chapter five, a method is the mechanism that assists the researcher in conducting an investigation. It connects the research question and answer through a process of contextualised argumentation (Biggs & Büchler, 2007:67; Slager, 2011:335). In the context of conducting multi practitioner PLR projects and the TOKC, this involves a process of moving from the tacit knowledge dimension to that of explicit knowledge.

The underlying premise of the TOKC that individual tacit knowledge can be amplified, enriched and converted to explicit knowledge by means of social interaction, which will benefit the whole organisation (Nonaka, 1994:14), implies that the cycle begins with social interaction and tacit knowledge and moves towards more explicit knowledge dimensions. The TOKC utilises knowledge conversion mechanisms, such as the SECI modes and the related *ba* and knowledge assets, to facilitate this process. As indicated, the SECI modes consist of four knowledge conversion processes: socialisation: tacit to tacit conversion: externalisation: tacit to explicit conversion: combination: explicit to explicit conversion and internalisation: explicit to tacit conversion (Nonaka, 1994:18; Nonaka *et al.*, 2006:1182). The overarching methodology of the TOKC entails the utilisation of tacit knowledge, is brought to the surface and is then converted into more explicit forms by means of knowledge conversion mechanisms (SECI modes, *ba*). This process is driven and facilitated by social interaction.

This correlates with the methodological approach to research conducted in the PLR context, which involves artistic action, creation and performances as a fundamental

component of the creative process that needs to be situated within the cultural context (cf. Borgdorff, 2011:57; Sullivan, 2011:99; Farber, 2010:2; Munro, 2011). The type of knowledge that is deemed valuable, and that is taken forward, will be that which is most aligned with the organisational knowledge vision. While the overarching method is guided by the SECI modes within self-organising teams or fields of interaction, a variety of related methods may be used to facilitate knowledge creation. Interestingly, the bipolar congruence as a dialectical process of the participatory paradigm (cf. Chapter four) utilises the interaction between experiential, presentational, propositional and practical ways of knowing (Heron, 1996:167). Generally, this process starts from the tacit and moves towards more explicit knowledge formats where a similarity between the bipolar congruence as dialectical process and the SECI modes exists. A more detailed discussion of this correlation is undertaken in Chapter seven. There is also a correlation between reflective practice and the knowledge creation process. As discussed in Chapter three, reflective practice involves a cycle of exploratory experiments, move testing experiments and hypothesis testing experiments which proceed from tacit to explicit knowledge (Schön, 1983:145-146).

The specific methodological approach of PLR is difficult to identify and project dependent (cf. Chapter five). However, multi-practitioner arts-related PLR projects executed at the NWU have been designed and executed in four phases. The first is the conceptualisation, planning and preparation phase, while the second is the knowledge creation phase. The third consists of the knowledge presentation and communication phase while the fourth is the formalisation and dissemination of knowledge phase. These projects move progressively from planning and preparation to the creation and exhibition of creative output and, finally, to the production of research articles. This represents a move from the tacit to the explicit dimension (cf. Chapter two).

Concomitantly, beginning with the tacit and moving towards more explicit research outcomes is characteristic of TOKC, multi-practitioner arts-related PLR projects and knowledge creation within the participatory paradigm. In order to ensure a critical

application of the TOKC, the criticism levelled at this theory are discussed in the next section.

6.5 Critique of the theory of organisational knowledge creation

The TOKC has been broadly accepted and applied in the knowledge management context and has attracted little systematic criticism. According to Richter (2011:1), this is probably the most widely cited theory of knowledge management and has reached what Gourlay (2003:1; 2006: 1416) calls “paradigmatic status” (cf. Glisby & Holden, 2003; Rice & Rice, 2004; Schütt, 2003; Kriener, 2002; Brătianu & Orzea, 2009). However, Richter (2011), Gourlay (2003) and Brătianu (2010) are of the opinion that this esteemed status is unwarranted (Tsoukas, 2002). There are basically three areas of criticisms: the first has to do with the validity and appropriateness of applying the theory within different cultural contexts. The second discusses the lack of empirical evidence to support the knowledge conversion claims of the theory and, in particular, the SECI modes while the third is concerned with the interpretation of tacit knowledge with regard to knowledge management.

Regarding the first critique, Glisby and Holden (2003) and Brătianu (2010) suggest that the TOKC and the SECI modes, specifically, are embedded in the Japanese culture (cf. Ray & Clegg, 2005). They suggest that the prioritisation of tacit knowledge and the group-orientation of Japanese society are not necessarily transferable. As such, they question the uncritical transferability of this model to different cultural contexts. Related to the issue of cultural context, Brătianu (2010:196) is of the opinion that the middle-up-down management model is unattainable in the Western context.

It is important to note that Brătianu, in his critique, did not take into consideration that in Nonaka’s approach, members of top management strategically select middle managers who will manage self-organising teams (fields of interaction) according to the knowledge vision of the organisation. The role of the top manager is to prepare the ground and clear away obstacles so that the teams can operate effectively (Nonaka, 1994:32).

Both top and lower management perspectives inform the middle manager's vision and bridge the gap between top management's vision/dream and the reality of the lower managers. It is a process that allows knowledge creation to take place simultaneously and collaboratively on top, middle and lower managerial levels (Nonaka, 1994:32). In this way, middle managers translate the vision of top managers into middle range visions that are realised through the creation of fields or groups of interaction. The notion that middle managers have autonomy to manage project teams so as to attain certain objectives aligned with the organisational vision is not a uniquely Japanese phenomenon. Interestingly, the multi-practitioner PLR projects conducted at the NWU originated as self-organising teams established by middle managers. These managers were aware of both the institutional (top management) and creative practitioners' needs and designed projects that would meet both sets of requirements. As such, the notion that subordinates only function by following orders from above is not true in the context of these projects. In fact, these projects have played a fundamental role in informing the top managers of the value of PLR in this specific faculty.

Glisby and Holden (2003:35) contend that the transferability of the SECI model depends on its compatibility with the tacit foundation of the particular context to which it is applied. The authors (2003:36) are not suggesting that the TOKC be abandoned. They propose that for non-Japanese companies, SECI modes be viewed as a map or a mirror to gain a different knowledge management perspective, rather than serving as a specific model.

While it is considered prudent to take cognisance of the critique by Glisby and Holden (2003:35), Schulze and Hoegl (2006:225) have demonstrated that the theory can be successfully applied outside of the Japanese context. They conducted a study that was concerned with evaluating the value of the SECI modes in relation to successful new product development. Data was gathered from the development of 94 new products in 33 European (German, Austria and Swiss) companies. Of significance in this study was the conclusion that the SECI model may be successfully applied to the project context and does not have to involve the organisation as a whole (Schulze and Hoegl, 2006:225).

The issue of being able to use this model outside the Japanese context is, in my opinion, more about the conceptualisation of knowledge than the specific cultural context. Applying the SECI modes in a top-down hierarchy, in which knowledge is viewed as information that informs action, is not likely to succeed. This means that SECI modes will not be productive in a context that over-prioritises explicit knowledge and suppresses the individual's contribution to knowledge creation, in pursuit of economic rationality. Additionally, I agree with Glisby and Holden (2003:36) that the SECI modes should be viewed as a flexible process. This notion of flexibility should be informed by the objectives and nature of the particular project being conducted. Thus, when managing multi-practitioner PLR projects, one should take cognisance of the fact that specific SECI processes are productive at particular stages of the process. As such, the specific SECI process needs to be selectively initiated in accordance with the requirements of the knowledge hierarchy. Therefore, Li and Goe (2003:13) correctly believe that the knowledge hierarchy of the particular context needs to be surveyed in order to establish where the tacit knowledge lies, before choosing a methodology.

The second critique of the TOKC (Richter, 2011; Gourlay, 2003) is that there is not enough empirical evidence to support the knowledge creation claims. While this may have been true during the early phases of knowledge management, there are a growing number of studies, such as the one by Schulze and Hoegl (2006), discussed above, that have delivered empirical data which shows that this theory can be positively applied (cf. Rice & Rice, 2006; Chou & He, 2004).

The third critique of the TOKC is rooted in the understanding of tacit knowledge as conceptualised by Polanyi (1962; 1966a; 1966b). Tsoukas (2002) and Gourlay (2002) contend that the widely accepted notion of tacit knowledge as a knowledge modality that may be converted in its entirety to explicit knowledge is a misinterpretation of the original concept. In accordance with Polanyi, Tsoukas (2002:15,16) stated that tacit and explicit knowledge could be viewed as different sides of the same coin; sides that are impossible to separate. As discussed in Chapter two, any propositional knowledge has a personal coefficient (Polanyi, 1962:17). Tsoukas (2002:2) concluded that in the

popular view of management studies (strongly influenced by Nonaka *et al.*), tacit knowledge and explicit knowledge are conceived of as being opposite to each other or on opposite ends of a knowledge continuum. Furthermore, he states that Nonaka and Takeuchi (1995) considered tacit knowledge to be knowledge that has not yet been articulated. He argued that if one treats tacit knowledge as having a precisely definable content that could be put into words, this reduces and impoverishes the very notion of practical knowing.

The problem that Tsoukas (2002:15) identified has to do, not with the utilisation of tacit knowledge, but rather with the conversion and modes of communication. He suggested that focusing on the notion of conversion is problematic in that the ineffability of tacit knowledge counteracts the utilisation thereof. In concurring with Tsoukas (2002), Brătianu (2010:195) contends that the SECI model is not a knowledge conversion process. He considers externalisation and internalisation as such processes, whereas socialisation and combination are considered processes in which knowledge exchange takes place.

While it is acknowledged that knowledge conversion could be viewed as problematic during socialisation, the notion that this is only a knowledge exchange mode is equally problematic. In light of the notions of the proximal and focal dimensions, socialisation could be considered a knowledge surfacing and knowledge exchange mode. However, the other three modes are still considered knowledge conversion modes. The contention that combination is merely knowledge exchange, is considered problematic because the combination of different explicit concepts may result in new knowledge; thus, knowledge conversion is evident. In this regard, I concur with Nonaka *et al.* who consider combination to be a systematic collection of knowledge used to create new knowledge through the insightful and imaginative combination and analysis thereof (Schultz and Hoegl, 2006:216).

The critique by Tsoukas (2002) and Brătianu (2010:195) is based on the premise that the TOKC interprets tacit and explicit knowledge as opposing knowledge dimensions.

This is a misinterpretation of the TOKC, because the ontological and epistemological foundation of knowledge acknowledges a holistic notion of knowledge. Tacit knowledge is derived from personal experience, prior learning, skill and the application of intuition. This personal experience is informed by and integrated with theoretical constructs and is considered a valuable source of knowledge. Tacit and explicit knowledge are therefore, considered interrelated and intertwined concepts that can be communicated by reflective practice and sensory experience. This is why Nonaka and Takeuchi (1995:60, 85) emphasise the notion of knowledge exchange through direct experiences, such as social interaction.

While one could debate the view that the knowledge conversion, knowledge exchange or knowledge surfacing occur in individual modes, the critiques by Tsoukas (2002) and Brătianu (2010) seem to be losing sight of the fact that the ultimate purpose of the SECI model is knowledge creation. In this context the SECI model could be viewed as a knowledge exchange, knowledge surfacing and knowledge conversion model that leads to new knowledge.

While the aforementioned critique focuses on the notion of conversion, a more relevant issue is whether the tacit dimension can be discussed and explicated. This assumption that tacit knowledge can be explicated, to a certain degree, is supported by the majority of authors in the fields of knowledge management and PLR (cf. Schulz & Hoegl, 2006; Durling & Niedderer, 2007; Farber & Mäkelä, 2010; Gray & Malins, 2004; Niedderer & Imani, 2008; Nonaka & Von Krogh, 2009). The underlying assumption is that the content, context and interrelated meaning are able to be discussed or put into words but that sensory experience remains tacit (Polanyi, 1968:32; Janik, 1988:54). In terms of PLR, the notion of multimodal communication is important. In other words, the inclusion of those knowledge modalities that cannot be adequately articulated in words, such as listening to music, needs to be experienced, in addition to describing them, to inform understanding.

The following conclusions may be drawn from this section. Firstly, the notion that the TOKC should not be uncritically applied is important. The organisational culture or nature and objectives of the project need to be taken into consideration. The issue of defining the knowledge hierarchy and establishing where the tacit dimension lies, is of significance. In this context, the compilation of a project team should be informed by the particular objectives, knowledge vision, and knowledge assets, which will allow for effective functioning. Additionally, when managing multi-practitioner arts-related PLR projects, the role of the project leaders, who might be considered middle managers, needs to be clarified. In this context, the middle manager needs to balance institutional research requirements with the notion of PLR.

Knowledge communication and dissemination should include the discussion of content, context and sensory experience. Accordingly, the notions of experiential knowledge, presentational knowledge, propositional knowledge and practical knowledge discussed in Chapter three, are relevant in this regard as they allow for the holistic communication of both tacit and explicit knowledge.

6.6 Conclusions

As mentioned in the introduction, the aim of this chapter was to investigate whether PLR and the TOKC share the same paradigmatic foundations. Fundamental to this investigation was the contention that PLR and the TOKC share the same epistemological, ontological and methodological foundation and may therefore, be accommodated within the participatory paradigm. It was important to substantiate the use thereof to analyse the TBP project in Chapter eight.

In line with this purpose, a historical, contextual overview of the TOKC was given, in which core concepts such as the SECI modes, knowledge assets and *ba* were introduced. In this regard, the multi-practitioner arts-related PLR projects conducted at the NWU could be considered self-organising teams managed by middle managers. This concept is explored in more detail in Chapter eight, in order to further inform the analysis of the TBP project.

The ontological, epistemological and methodological aspects of the TOKC were explored and correlations between the participatory paradigm and PLR identified. Knowledge in this context is a holistic construct viewed as a combination of the tacit and explicit knowledge dimensions. Therefore, personal experience, skill, intuition and explicit knowledge are equally important. Knowledge, in terms of the participatory paradigm, PLR and the TOKC, is viewed as inter-subjective, human centred and process-relational; it is created in practice and communicated in both tacit and explicit formats. It is concluded that the ontological, epistemological and methodological foundations of the participatory paradigm, PLR and the TOKC are compatible. Critiques of the TOKC were discussed; it became evident that the TOKC should not be uncritically applied and that aspects, such as defining a knowledge vision and taking cognisance of the particular project context, are important. The interrelatedness of the knowledge conversion mechanisms and how they relate to the participatory paradigm is discussed in detail in Chapter eight.

CHAPTER SEVEN: THEORETICAL EXPOSITION OF KNOWLEDGE CONVERSION MECHANISMS

7.1 Introduction

In the previous chapter, the conceptualisation and historical development of the theory of organisational knowledge creation (TOKC) were discussed. Additionally, emphasis was placed on the correlations between the ontological, epistemological and methodological foundations of the TOKC and the participatory paradigm. This chapter, however, is concerned with the knowledge conversion mechanisms inherent to the TOKC; its aim being to lay the conceptual foundation for the discussion of the management phases (Chapter two) of the *Transgressions and boundaries of the page* (TBP) project to be presented in Chapter eight. This aim is addressed here by providing a detailed description of the knowledge conversion mechanisms in the interest of identifying correlating dimensions between these mechanisms and the participatory paradigm. The correlations and similarities between the four levels of knowledge assets, the SECI³⁶ modes, *ba* (space) (Chapter six) and the extended epistemology of the participatory paradigm, are clarified and categorised. Four categories are identified to be used as conceptual tools for the said discussion of the management phases of the TBP project in Chapter eight.

This chapter contains two sections: the first concerns the individual knowledge conversion mechanisms and the second, the manner in which these mechanisms relate to each other and correlate with the participatory paradigm. Tables 4 to 7 at the end of the chapter, offer a consolidated view of the interconnectedness and correlations between the knowledge conversion levels and the extended epistemology of the participatory paradigm.

³⁶ Socialisation (tacit to tacit conversion), Externalisation (tacit to explicit conversion), Combination (explicit to explicit conversion) and Internalisation (explicit to tacit conversion) SECI modes.

7.2 Knowledge conversion mechanisms

As considered in the previous chapter, the knowledge conversion mechanism consists of the SECI modes, *ba* and knowledge assets. Despite it being understood that knowledge assets were a later addition to the TOKC, they are the first knowledge conversion mechanism to be discussed (Nonaka *et al.*, 2000). The reason for this is that such assets inform and mobilise the other knowledge conversion mechanisms. Accordingly, there needs to be an understanding of knowledge assets in order to comprehend the functioning of the SECI modes and *ba*.

7.2.1 Knowledge assets

In the contemporary business context, the knowledge that an organisation possesses and the utilisation thereof is one of its most important competitive advantages. The basic premise is that if an organisation can effectively create and manage new knowledge, it will deliver superior products and services (Schulze & Hoegl, 2006:211; Jakubik, 2007:1). However, due to the tacit nature of knowledge in an organisation, knowledge assets are difficult to define and are often dependent on the context and organisation. The said assets of an organisation include both inputs and outputs, which constantly interact and transform the knowledge creation process. As such, the knowledge and, by implication, knowledge assets are in a continual state of dynamic flux. In order to maximise the use of knowledge, these assets need to be customised and used to suit the specific context (Nonaka *et al.*, 2000:21; Chou & He, 2004:147). Knowledge assets are simultaneously physical and intangible; processes are used to convert knowledge and information to add value to the organisation or specific project (Nonaka *et al.*, 2008:42).

The two major components of knowledge assets are structural capital and human capital. The former includes organisational systems and structures, while human capital refers to the capabilities of employees, such as experience, skills and creativity. The latter form of capital is important, as the conversion process is driven by social interaction, while structural capital often provides context and mechanisms for this interaction. In essence, this means that the knowledge an organisation already

possesses largely determines that which it will produce. Nevertheless, the TOKC process is designed to facilitate a more creative and innovative utilisation thereof. Nonaka *et al.* (2000:21) correctly state that organisational knowledge assets form the basis of organisational knowledge creation (cf. Chou & He, 2004:147). It should, however, be noted that knowledge creation and the shaping of knowledge assets is a continuous and on-going process, as knowledge is constantly being created.

In order to comprehend and contextualise knowledge assets, Nonaka *et al.* (2000:21) postulated four knowledge asset categories: (i) experiential knowledge assets, (ii) conceptual knowledge assets, (iii) systemic knowledge assets and (iv) routine knowledge assets.

However, as will become evident, they often overlap and are in fact, grounded in one another.

It is contended that the four knowledge asset categories correlate to the four epistemological distinctions of the participatory paradigm (cf. Chapter four). As such, experiential knowledge assets correlate with experiential knowledge; conceptual knowledge assets with presentational knowledge; routine knowledge assets with practical knowledge and systematic knowledge assets with propositional knowledge. These correlations (visualised in Figure 11 page), which are clarified in the discussion of each knowledge asset, support the assertion that the TOKC and practice-led research (PLR) are synergetic concepts.

Although knowledge assets need to be managed during any project, this is often done in an intuitive manner. Therefore, the notion of knowledge assets as conceptualised by Nonaka *et al.* (2000) is potentially useful in the context of multi-practitioner arts-related PLR projects. This is because, if managers understand the theoretical basis of the knowledge assets being managed, they can link them to the appropriate knowledge creation processes (SECI modes and *ba*), thus facilitating more effective knowledge creation. The motivation behind this proposed methodological, chain of actions and

reactions is the utilisation of tacit knowledge by both multi-practitioner arts-related projects and the TOKC in a cyclical process that moves toward explicit knowledge (cf. Chapter six).

7.2.1.1 Experiential knowledge assets

Experiential knowledge assets are conceptualised as the hands-on experience possessed by various individuals and shared between these members of the organisation. Trust and a willingness to interact and transcend the self through interaction with others are important in this dimension. Skills, experience and expertise, accumulated by the individual, are knowledge assets. A parallel may be drawn between experiential knowledge assets and PLR, where the latter is often conducted as a collaborative activity. In the context of PLR projects, participants engage in a multi-directional learning and development process, which contributes to the larger pool of knowledge (Gray & Marlins, 2004:21; cf. Rust *et al.*, 2007:51). In other words, both collaborative PLR and the conceptualisation of knowledge assets involve interaction and collaborative learning. As a result, individuals from different disciplines and diverse personal frames of reference learn from each other through an interpersonal exchange of knowledge (cf. Greyling & Marley, 2010:167-168; Borgdorff, 2011:53; Brown & Sørensen, 2009:156).

For Nonaka *et al.* (2000), experiential knowledge assets include emotional, physical and energetic knowledge. Emotional knowledge assets encompass aspects such as care and trust, which could be equated to emotional intelligence, when utilised in the knowledge management context. Physical knowledge includes the use and reading of body language. In addition to these capabilities, are those attached to energetic knowledge as a sub-division of physical knowledge. Energetic knowledge refers to the utilisation of human energy and enthusiasm in order to facilitate knowledge creation.

Therefore, experiential knowledge assets are comprised of emotional and physical experience and skills. In congruence with the conceptualisation of knowledge in terms of PLR, these knowledge assets tend to be tacit in nature. Self-reflectivity is also central to both PLR and the notion of knowledge assets (Farber, 2010:2; cf. Schön, 1983:79). The

recognition of experiential knowledge assets is important in the PLR context as tacit knowledge (derived from personal experience, prior learning and skill) and intuition, integrated with theoretical constructs, are considered valuable knowledge resources. Additionally, PLR may be characterised as an exploratory journey with a variety of investigative, exploratory possibilities, undertaken in the academic context.

It would seem as though there is a correlation between experiential knowledge assets and the notion of experiential knowledge, which constitutes one part of the four-part knowledge epistemology of the participatory paradigm discussed in Chapter four. The reason for this assumption is that both experiential knowledge assets and experiential knowledge can be viewed as an idiosyncratic dimension (cf. Chapter five) of the participatory paradigm. Therefore, these types of knowledge assets are not merely personal experience that is unquantifiable but, rather, a valuable dimension of the knowledge creation cycle.

Experiential knowledge assets fall under the category of human capital knowledge assets. Therefore, in the context of multi-practitioner art related PLR projects, in order to reach the particular knowledge vision of the project, it is important to include those participants who have the necessary experiential knowledge.

7.2.1.2 Conceptual knowledge assets

Conceptual knowledge assets are easier to assess as they have a tangible explicit form and are expressed via images, symbols and language. Concepts held by members of the organisation form the basis of this dimension (Nonaka *et al.*, 2000:21-22; cf. Chou & He, 2002:150). This knowledge dimension is concerned with the conceptual knowledge possessed by individuals that can be utilised but which has not been formalised into a written document. It is thus the conceptual knowledge contained within the proximal knowledge stock of individuals, which comes to the fore during the working process. This is similar to the notion of presentational knowing, which is grounded in experiential knowing as discussed in Chapter four (Heron, 1996:33-34:53). In congruence to conceptual knowledge assets, presentational knowledge is regarded as the process of

deriving meaning, patterns and patterns of meaning from experiential knowledge. This process is informed by theory but may be presented as metaphors and aesthetic creations in the form of graphic, plastic, musical vocal and verbal art forms (Heron & Reason, 1997:281).

The organisational mission and vision and their translation into branding and brand communication (brand promise and brand equity) contribute to the conceptual framing of the organisation by individuals. Although conceptual knowledge assets are more tangible than experiential knowledge assets, they are still based on the perception and understanding of individual members (Nonaka *et al.*, 2000:21). Therefore, developing a clear vision and mission for projects and communicating this effectively are considered conceptual knowledge assets.

In realising this, project leaders may use branding principles to manage and effectively communicate messages. This entails effectively positioning the aims and objectives of the project in the mind of the participants. Thomas Gad (2001:22) regards brand positioning as the process of “creating the correct headspace” in the mind of the consumer; consequently, the brand or project does not exist only in physical space, but also as a mental footprint. Lamos (2005:31) suggests that brand positioning provides the mental “hook” for customers, prospects, employees, suppliers and all the other people to whom the brand or project are being communicated, to properly receive and store information. It makes that information understandable and familiar enough to be accepted and provides the foundation and frame of reference for what should be expected from the particular brand.

The notion of brand positioning is relevant to the multi-practitioner arts-related PLR projects conducted at the NWU, as each project had a broad theme and specific research context that needed to be communicated. In both the TCC project and the TBP project, individual brands were created which functioned as an instrument to achieve the project objectives (cf. Chapter two). These brands helped to frame and guide the thinking, functioning, communication and conceptualisation of knowledge. In other

words, the brand positioning determined and contributed to the type of knowledge created (Marley & Greyling, 2010:175). As stated earlier, the correlation between conceptual knowledge assets and presentational knowledge is important in that it indicates that the notion of conceptual knowledge assets can be accommodated and utilised in the participatory paradigm.

7.2.1.3 Systemic knowledge assets

These knowledge assets consist of codified systematic explicit knowledge. They are easily transferable to others in the form of textual documents such as manuals, reports, articles and electronic databases. This type of knowledge asset has often been justified according to the specific organisational contexts; and mechanisms, such as patents, which legally protect the organisation's intellectual property, are often included. This is the most visible / tangible knowledge asset; current knowledge management of information management systems therefore prioritises this dimension (Nonaka *et al.*, 2000:21-22; cf. Chuo & He, 2002:150).

As stated earlier, the knowledge in the PLR and TOKC context is viewed as a combination of the tacit and explicit knowledge dimensions. In this context, systemic knowledge assets share the characteristics of language-based statements, containing propositional knowledge which can be clearly communicated by textual / written means. In terms of PLR and the TOKC, systemic knowledge assets are, for the most part, derived from experiential knowledge and presented in textual forms, such as process books, textual information that accompanies artwork or academic articles. Accordingly, systemic knowledge assets are viewed as explicit knowledge and, as such, display the same characteristics as propositional knowledge discussed in Chapter four. This is a further indication that knowledge assets could be associated with the participatory paradigm and, by implication, could be utilised in PLR.

Another aspect attributed to systemic knowledge assets is the range of systems that allow for the creation and management of knowledge. In terms of the multi-practitioner arts-related PLR project, conducted through employing the NWU, Potchefstroom

Campus systems, such as Internet access, digital database systems and the research office, these are considered valuable systemic knowledge assets. The reason for this is that these systems allow for the effective creation, communication and dissemination of knowledge.

7.2.1.4 Routine knowledge assets

Routine knowledge assets involve the practical transferability of tacit knowledge via the routines of particular actions or day-to-day routine tasks. This constitutes the continuous application and execution of reinforced patterns of thinking and action. Shared context and institutional memory help members form routine knowledge (Nonaka *et al.*, 2000:22).

However, routine in this context is not thought of as a repeatable, unchanging process but rather as a creative routine or *kata*. *Kata*, a Japanese word, means pattern or way of doing and refers to the adroit synthesis of behaviour and thought in skilful action. Thus, *kata* incorporates the notion of freedom in the innovation of a routine based on observation. In essence, it allows for the transformation of both the process/routines and the individuals involved. In this context, creativity and innovation are encouraged (Nonaka *et al.*, 2008:43). *Kata* comprises of three stages: *Shu*, *Ha* and *Ri*; *Shu* (learn), *Ha* (break/re-evaluation) and *Ri* (create/innovate). This is the process of learning, mastering, and embracing (*Shu*). Subsequently, learned practice and routine is then reinvented by re-evaluating the process in the light of one's own experience and creative inspiration (*Ha*). Finally, *Ri* involves creating and developing one's own practice or routine (Nonaka *et al.*, 2008:43-44).

In short, *Kata* is a dynamic process, allowing for the interrogation of existing routines in search of more innovative and effective solutions. This process is beneficial to the individual in terms of self-actualisation and to the organisation in terms of the revision and development of effective operational functioning. The modus operandi of *Katas*, which utilises personal behaviour and thought in skilful action in order to solve problems or develop innovative ways of doing, correlates with the notions of reflection-in-action

and reflection-on-action (Schön, 1983; 1987; cf. Chapter three). As discussed, reflection-in-action is an analytical process of framing problems and reacting to the situation in a manner not determined by a specific pre-established theoretical dictum, but rather as a process of exploration informed by both tacit and explicit knowledge (Schön, 1983:54; 1987:28). Consequently, reflection-in-action and *Ha* are considered compatible concepts as they both engage the same analytical process, involving the use of experience, as a form of tacit knowledge, when evaluating action. Similarly, reflection-on-action is conducted as a type of post-mortem on reflection-in-action undertaken in order to achieve a more satisfactory result (Schön, 1983:61). This equates to the interaction between *Ha* and *Ri* described above.

In this context, reflective practice, which is commonly used in PLR and *kata*, are viewed as comparable concepts. Therefore, this similarity underpins the compatibility of the TOKC with PLR. *Kata* may be equated to practical knowledge, which is the ability to execute a particular practical skill and the utilisation of one's repertoire and level of artistry in the execution of a task. It is thus contended, that both practical knowledge and routine knowledge assets are often grounded experientially and in propositional knowing and come to fruition in presentational form (Heron & Reason, 1997:281). The notion of *Kata* is considered relevant when considering the larger managerial context of multi-practitioner arts-related PLR projects at the NWU. In this context, the experience gained during the TCC project was useful in adapting and improving the management of the TBP project. An important consideration in the context of this study is that the TBP project started with routine knowledge assets and the related notion of practical knowledge. As will be discussed later, the SECI mode associated with this knowledge asset is internalisation. Consequently, the application of the SECI modes in this context starts with internalisation and not socialisation. In other words, instead of progressing through the SECI mode process, this project is viewed as an ISEC (Internalisation, Socialisation, Externalisation, and Combination) process. This is not fundamentally different as the SECI process is cyclical in nature and all modes are eventually engaged with. Nevertheless, for the purpose of clarity, the SECI modes and the project analysis undertaken in Chapter eight start with internalisation (as an ISEC modes process).

Therefore, being cognisant of knowledge assets when designing and managing multi-practitioner arts-related PLR projects is essential. This is particularly so, as the different knowledge assets relate to specific aspects of the extended epistemology of the participatory paradigm. Recognition has been given to the notion that knowledge assets and the four knowledge modalities of the participatory paradigm are grounded in, and interact with, each other. As mentioned, and in light of the discussion above, the following correlations are proposed. Experiential knowledge assets correlate with experiential knowledge; conceptual knowledge assets correlate with presentational knowledge; systematic knowledge assets correlate with propositional knowledge and routine knowledge assets correlate with practical knowledge. Consequently, it may be said that experiential, conceptual and routine knowledge assets are more akin to tacit knowing, while systemic knowledge assets relate more closely to explicit knowledge. Figure 11 below, is adapted from the bipolar congruence as dialectical process (Figure 5), discussed in Chapter four and illustrates the correlating aspects between knowledge assets and the extended epistemology of the participatory paradigm (Heron, 1996:167).

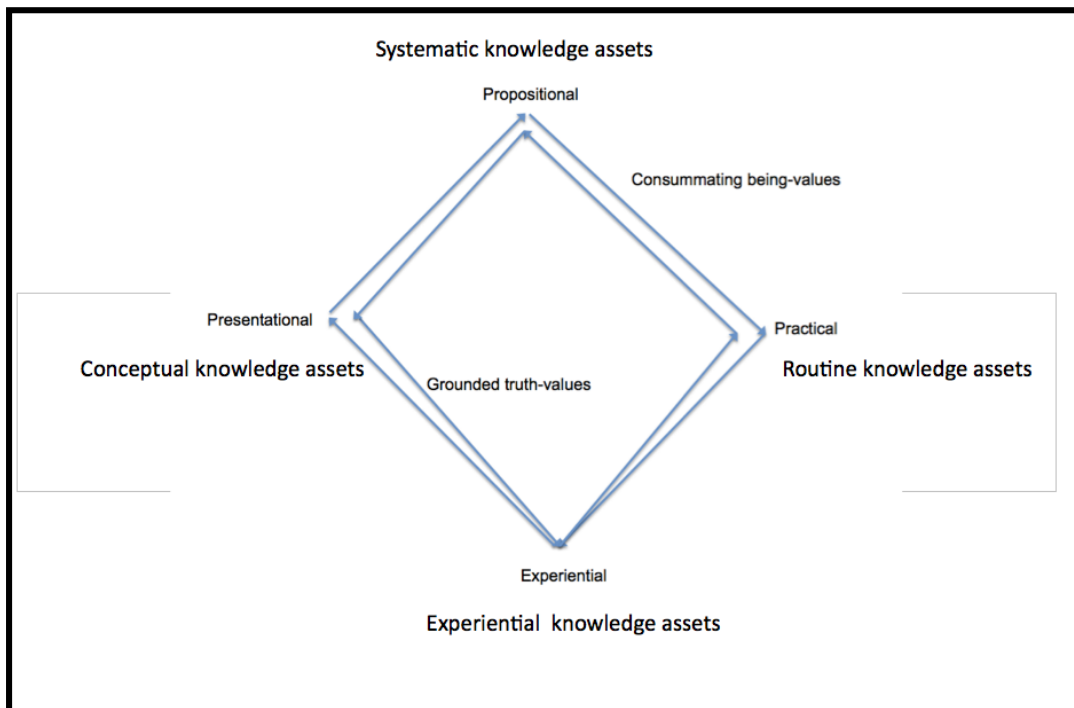


Figure 11: The correlating aspects of knowledge assets and the extended epistemology of the participatory paradigm

In concluding this section, the following assumptions may be made. Due to knowledge assets being relevant to specific contexts, the opportunity exists within the design and management of multi-practitioner PLR projects to select and utilise specific assets of this kind. Therefore, certain knowledge assets should be used to foreground particular knowledge dimensions at the appropriate time.

Moreover, project leaders managing multi-practitioner arts-related PLR projects in the NWU context could be considered middle-up-down managers functioning between the university and the selected participants (cf. Chapters two and six). The knowledge vision of the project is informed by the institutional research context, the managers and the creative practitioners involved. As is the case with PLR, the project managers are involved as both academics and creative practitioners and act to connect these two domains. This relates back to the role of the researcher in PLR (Gray & Malins, 2004:20; Chapter one). These roles are that of the creative practitioner and of the self-observer who engages in reflection in and on action, both individually and through social interaction with others as well as that of co-researcher, facilitator and manager.

Participants in multi-practitioner arts-related PLR projects in the NWU context are considered self-organising teams. The experiential, conceptual, and routine knowledge assets are thus important when selecting the appropriate members and creating a team and working environment for the field of interaction. Equally, conceptual and systemic knowledge assets are important in managing and guiding such projects.

Therefore, the notion of knowledge assets is an aspect of the TOKC that could be useful in the execution of multi-practitioner arts-related PLR, particularly if one considers that PLR projects functioning within the academic environment may essentially be designed to adhere to a specific knowledge vision that is not necessarily restricted by the existing stock of knowledge. In other words, the structural capital of the institution can be utilised as the basis for creating a specifically selected self-organising team from within and outside of the organisation. Therefore, the awareness of the notion of knowledge assets could facilitate knowledge creation and conversion by including individuals with specific

skills. With regard to this, I agree with Chuo and He (2001:149), who contend that there is an interdisciplinary enhancement of knowledge when people from different backgrounds and disciplines come together.

Additionally, in this research it is contended that there is a positive correlation and relationship between the different knowledge assets, the SECI modes and the extended epistemology of the participatory paradigm. This contention is examined in more detail in the following section.

7.3 SECI knowledge conversion modes

As mentioned earlier, in the SECI model, tacit and explicit knowledge interact in four different ways or modes. Together, these modes or processes constitute the mechanism that facilitates the conversion of existing knowledge into new knowledge. Social interaction is the driving force of this model. Therefore, the premise that new knowledge can be created by means of conversions between tacit and explicit knowledge brought about the postulation of the following modes: socialisation (tacit to tacit conversion), externalisation (tacit to explicit conversion), combination (explicit to explicit conversion) and internalisation (explicit to tacit conversion) (Nonaka, 1994:18; Nonaka *et al.*, 2006:1182).

The knowledge creation spiral requires constant dialogue between the four knowledge conversion modes and, by implication, between tacit and explicit knowledge. Therefore, while each mode generates new knowledge independently, organisational knowledge creation hinges on the interaction of the four modes and their utilisation. Organisational knowledge management occurs when all four modes are managed to form a continuous cycle. Certain processes are used to bring about the shift between the different knowledge conversion modes. As mentioned in the previous section, internalisation is considered the initial process in the context of this study (cf. Marley, 2012:12). Accordingly, the following discussion commences with internalisation and concludes with combination.

7.3.1 Internalisation (explicit to tacit conversion)

Internalisation involves the conversion of explicit knowledge to tacit knowledge that is able to be shared on an organisational level. This implies that individuals identify and acquire explicit knowledge created during the externalisation and combination stages. Knowledge is explored by means of practice and, as such, individuals acquire and understand the tacit dimension of this knowledge.

Conversion occurs in two steps: Firstly, explicit knowledge has to be identified, explored and embodied through action and practice. The process of internalising explicit knowledge allows for the understanding of methods, strategy, processes and innovations. This type of knowledge is often transferred by means of workshops and/or training sessions. Secondly, the embodiment process is facilitated by the use of simulations or experiments to initiate learning by doing. Such situations allow the individual to transcend personal knowledge (or the self) and to benefit from the larger organisational context (Nonaka & Konno, 1998:45). In this sense, one of the knowledge dimensions generated is “operational” knowledge (Nonaka & Takeuchi, 1995:238). Concepts and theories are concretised by means of an iterative process of trial and error. As mentioned in Chapter two, this was certainly the case in the TCC project. This type of experimentation, in turn, triggers the internalisation process by means of “learning by doing” or by testing the theory. The notions of theory testing and application often encompass a practical dimension that will facilitate the flow from the explicit back to the tacit and *vice versa*. Accordingly, propositional knowledge and systemic knowledge assets are mobilised by means of practice to form new routines or practices. In this sense, propositional knowledge is converted into practical knowledge.

7.3.2 Socialisation (tacit to tacit conversion)

Socialisation is the process of utilising the experience shared between/by individuals and converting this into tacit knowledge. Tacit knowledge can be transferred through apprenticeships, mentoring programmes, on-the-job training, observation and the like. Experience is the primary driver of this form of knowledge conversion. Without shared experience, it is difficult for people to understand the tacit dimensions of knowledge. In

other words, thinking needs to be informed by hands-on, interpersonal experience. This type of knowledge is related to the notion of “knowing how” (Nonaka, 1994:18). Socialisation often occurs by means of informal interaction, during which people are viewed as having equal status. One form of knowledge that is created in this mode is what Nonaka refers to as "sympathetic" knowledge; this includes the notion of mental models and technical skills (Nonaka & Takeuchi, 1995:238; cf. Richter, 2011:5; Schulze & Hoegl, 2006:214).

In terms of socialisation, the first process is to build a self-organising team or, as it is also known, a field of interaction. This process helps to formalise the relationship between people from different backgrounds, perspectives and skills levels. The team provides a shared context of experience and trust while focussing members on the task at hand (Nonaka, 1994:19). Team members should be selected according to the experiential and conceptual knowledge assets they might be able to offer in furthering the particular knowledge vision (Chou & He, 2002:147). According to Schulze and Hoegl (2006:214), socialisation is central to the conceptualisation phase, and interpersonal interaction contributes to innovative thinking and a collective understanding of the project objectives. Considering that, as implied above, socialisation draws on experiential and conceptual knowledge assets, it can also be stated that, by implication, it utilises experiential and presentational knowledge dimensions. The multi-practitioner arts-related PLR projects conducted at the NWU could be regarded as self-organising teams because specific artists and theorists were selected to explore a particular theme. Therefore, socialisation is relevant in this regard. However, the recording of knowledge and knowledge transfer is probably at its most difficult at this stage. Therefore, it is essential to address what Rice and Rice (2006:675) consider one of the key challenges of knowledge management, namely the recording of knowledge for further use. One of the problems is the fleeting nature of knowledge exchange during this stage, but one could employ technology such as video to record these interactions. Both the interaction and reflection on interaction are of equal importance.

7.3.3 Externalisation (tacit into explicit conversion)

In essence, the process of externalisation entails the conversion of tacit knowledge held by individuals, and surfaced during socialisation, into explicit knowledge. This is necessary in order to make tacit knowledge transferable to others and to make it useful and applicable in a wider context. In other words, tacit knowledge needs to be codified in this process and should, therefore, be converted into an understandable format, such as words or images. This is often coupled with the notions of reflection-in-action and reflection-on-action. Knowledge created in this phase is such that one can begin to use it in the rationalisation and verification cycle.

The process that facilitates knowledge conversion during externalisation is constructive, formal and meaningful dialogue during which concepts are interrogated and reconceptualised. All participants are encouraged to contribute equally to both the listening and learning processes. In this way, knowledge is shared amongst the group and becomes collective (Nonaka & Konno, 1998:43).

Metaphors, analogies and examples are frequently used to help articulate the tacit, personal perspective in more understandable and unambiguous terms (Richter, 2011:2). The move from tacit to explicit knowledge in terms of the team context may be facilitated by utilising external knowledge. This mode delivers “conceptual” knowledge when practice and theory interact in the clarification of ideas (Nonaka & Takeuchi, 1995:238). The important knowledge assets during this phase are conceptual and systemic ones. In line with, and in terms of, the participatory paradigm, presentational and propositional knowledge are relevant to this phase, since they relate to conceptual and systemic knowledge assets, as shown in Figure 11. The conceptual knowledge inherent to the team is used in a more codified form to realise the conceptual thinking that took place during the socialisation mode. During externalisation, the team should be aware of the systematic knowledge assets, which allow for effective communication and dissemination, at its disposal. While socialisation is about free and uninhibited conceptualisation, externalisation is about grounding this thinking in theoretically-based practical execution.

7.3.4 Combination (explicit to explicit conversion)

Combination refers to the process of converting different bodies of explicit knowledge into new forms of explicit knowledge. This conversion involves the use of social activities such as meetings, dialogue sessions and colloquia. During these sessions, knowledge is shared, reconfigured and recombined in order to create new insights or possibilities, in this manner, converting existing explicit knowledge into new explicit knowledge (Nonaka, 1994:18). The conversion process works with information and knowledge, already codified as text or data, and further knowledge creation is facilitated by dialogue. In terms of the knowledge dimensions, combination is a further development of the externalisation process. It is thus grounded in conceptual knowledge assets and presentational knowledge, and develops into systemic knowledge assets and propositional knowledge.

The three important phases of the conversion process are (i) capturing and integration, (ii) dissemination and (iii) editing and processing. Capturing and integration involves collecting essential data from both internal and external sources and combining the data or knowledge. During dissemination, new knowledge is spread and shared among members. This may be done in various ways, for example, in meetings or presentations, or by creating database systems.

In the editing and processing phase, the knowledge that has been created is made explicit in the form of documentation, which is then put through a process of validation. In order for knowledge to be justified, it needs to be correlated with the knowledge vision of the institutions. This entails the process of making information concrete and useful (Nonaka & Konno, 1998:44). One of the knowledge dimensions generated here is propositional knowledge as this type of knowledge may be stored and reconfigured in data systems (Nonaka & Takeuchi, 1995:238). The combination process and the related propositional knowledge rely on and contribute to systemic knowledge assets.

The combination of external and internal knowledge is able to be facilitated by coordinating teams and their activities as well as through the documentation of existing

knowledge. With regard to its usability, this knowledge needs to be free flowing and without constraints. In terms of the multi-practitioner arts-related PLR projects conducted at the NWU, the combination process is equated to the process of writing academic articles and disseminating the generated explicit knowledge. In this context, concepts surrounding and informing artistic practice are articulated and contextualised to enhance understanding. In other words, combination is relevant to knowledge creation, communication and dissemination in multi-practitioner PLR projects.

To conclude this section: the SECI knowledge conversion model is built on the conceptualisation of knowledge as a people-centred, process-orientated, subjective/objective construct, which correlates to the understanding of knowledge postulated by the participatory paradigm. Social interaction, with the express aim of facilitating knowledge creation by formalising and stabilising the dialectic movement between tacit and explicit knowledge, drives this process. The movement is viewed as a spiral in which knowledge increases as it moves through the different modes, rather than taking on a circular movement. This is not only a move from tacit to explicit but also a move from creativity to efficiency, subjectivity to objectivity, and unverified to verified. As mentioned, this reflects the move from the tacit to the explicit when conducting multi-practitioner arts-related PLR projects at the NWU (cf. Chapter six). The utilisation and mobilisation of particular knowledge assets, which correlate with the SECI modes and the related knowledge dimensions, is considered beneficial to knowledge creation. The space in which this process occurs is discussed next.

7.4 *Ba*: knowledge creation space

Nonaka and Konno (1998:45-46) introduced the concept of *ba* to the TOKC in order to address the philosophical and practical aspects of space as it relates to the knowledge creation process. There are four types of *ba*: the originating *ba*, the interacting *ba*, the exercising *ba* and the cyber or systemic *ba*. These four types relate to different SECI modes and are designed to facilitate knowledge creation. The originating *ba* is associated with socialisation, the interacting *ba* with externalisation, the exercising *ba*

with combination and the systemic *ba* with internalisation (Figure 9 in Chapter two) (Nonaka & Konno, 1998:45-46).

The knowledge conversion activities that occur during the SECI modes are related to and influenced by the *ba* (space) made available for such interaction. Therefore, during the socialisation phase, space for social interaction must be created and could take the form of specific dialogue sessions, demonstrations or practical workshops. The relationship between *ba*, knowledge assets and the SECI modes is discussed in the next section.

According to Marley and Greyling (2010:173-174) and Niedderer and Imani (2008:10-13), the concept of *ba* as a conducive space for knowledge creation is appropriate for multi-practitioner arts-related PLR projects. These authors argue that in order to facilitate understanding and exploration in terms of practice as research, the space created must accommodate diverse explorations of creative practice and provide individuals with a sense of belonging and relevance in terms of their skills and knowledge.

In this context, multi-practitioner PLR projects need to create space in which creative practice is central to the research activities (Scrivener & Chapman, 2004:2-3). Additionally, the realisation that PLR needs to be explicated, communicated and disseminated in the academic context is of equal importance. In congruence with the extended epistemology of the participatory paradigm, SECI and *ba*, the knowledge creation cycle starts with the creative, tacit dimension and moves into the explicit dimension (Marley & Greyling, 2010:173-174; cf. Nonaka *et al.*, 2008:26; Nonaka & Von Krogh, 2009:641).

In the subsequent section, the conceptualisation of knowledge in relation to *ba* is discussed, followed by a discussion of the different categories of *ba* and, lastly, the relationship between *ba*, the SECI modes and knowledge assets.

7.4.1 Conceptualisation of knowledge within *ba*

According to Nonaka and Konno (1998:41), knowledge is embedded in the *ba* and is acquired through a process of reflecting on one's own experiences as well as the experiences of others. Reflective practice, as advocated by Schön (1984), is thus relevant and is utilised to contextualise and justify knowledge. When separated from the *ba*, knowledge becomes information because it is regarded as static and uncontextualised.

The conceptualisation of *ba* thus has an existential foundation, and the key platform for knowledge creation could be a physical space and/or a conceptual frame of reference that is conducive to knowledge sharing and creation. In other words, *ba* is a space conducive to the phenomena of knowledge creation. Interaction and exchange of ideas in the particular space allow knowledge to function as a phenomenon in motion (Gray & Densten, 2005:596). The place where knowledge emergence occurs can be through the individual, a group, a project, team, meeting or electronic mail group. Thus, the notion of *ba* unifies physical space with virtual and mental space, drawing the individual into the larger knowledge creation context of the self-organising team.

Ba's can exist on many levels and may be interconnected. The smallest component of a *ba* is embraced by the larger context. The team, for example, embraces the individual, just as the team is embraced by the organisation. When *ba's* are interconnected and interact, as in the example described, they collectively form *Basho*. The conjoining of *ba's* forms a creative space in which knowledge may be amplified (Nonaka & Konno, 1998:41). Although this issue is addressed in Chapter eight, an example of originating *ba* would be the project launch of the TBP project, during which ample provision was made for socialisation and interaction.

Getting involved in a *ba* allows one to transcend one's own limited perspective and become part of a space in which both rationality and intuition are harnessed to produce actionable creativity and creative solutions, or, as stated by Nonaka and Konno:

This exploration is necessary in order to profit from the “magic synthesis” of rationality and intuition that produces creativity. Within an organization, then, one can both experience transcendence in *ba* and yet remain analytically rational, achieving the best of both worlds (Nonaka & Konno, 1998:41).

As stated in Chapters one and six, a *ba* is a frame of space and time in which knowledge is a resource for further knowledge creation. Knowledge, in this sense, is intangible, unbounded and dynamic. If this resource is not used at a specific time or place, it becomes either meaningless or is lost altogether. Thus, the process requires the focus of knowledge resources at certain points. The *ba* serves as a platform for knowledge creation by concentrating and stabilising resources at specific points (space and/or time) in order to distil the knowledge base of individuals, groups and interactions.

The notion of *ba* inherently incorporates team atmosphere and team dynamics. The idea that the *ba* needs to be a place where individuals feel a sense of belonging, trust and care is reiterated in what Zarraga and Bonache (2005:674) call a “high care” atmosphere. According to them, knowledge transfer is enhanced when team environments are characterised by active empathy, leniency of judgment, courage to express opinions, mutual trust and access to help (Rice & Rice, 2006:677). This correlates with the aforementioned characteristics (Chapter four) of space conducive to PLR.

According to Nonaka *et al.* (2008:37-38) there are five factors that contribute to knowledge emergence in *ba*'s.

- (i) Firstly, a *ba* must be driven by the intention to achieve a certain objective or goal that normally relates to the organisation's knowledge vision. In this sense, it must pose a self-organising energy, engineered and facilitated by the *ba* manager. Without clarification of intention, it is impossible to judge or justify knowledge in terms of knowledge creation. Intentionality concerns the system, organisation, organisational functioning and the individual. Knowledge creation is the activity of knowing and understanding as it occurs in the context of purposeful activity. The intention of the system thus informs its activities (Nonaka, 1994:17). As mentioned in Chapter four, intentionality is one of the cornerstones of research (Scrivener,

2009:70-71). However, intentionality in the context of PLR can be framed as the intention to explore a particular theme rather than answer a predetermined question (Chapter five). This is particularly so regarding multi-practitioner arts-related PLR projects, in which a theme is often contextualised and explored from tangential perspectives. The aim of creative production in the PLR context is to advance the claim to originality, which is supported by a contextualised argument and disseminated for peer review (Biggs, 2006:3).

- (ii) The second factor that results in a *ba* being conducive to knowledge creation is a shared sense of context and purpose. A *ba* should allow for an open-minded and empathetic sharing of subjective tacit knowledge with the express purpose of transcending the self for the greater good.

- (iii) Thirdly, knowledge is created in a *ba* by means of synthesising subjective viewpoints. A *ba* benefits if diverse viewpoints and skills interact in the knowledge creation process. In this scenario, it is not unheard of to utilise knowledge from an outside source. In terms of PLR, interdisciplinary collaboration implies that individuals from different spheres, areas or domains are involved with/in the same activity (or within the same space). Collaboration is a dynamic process because participants have diverse frames of reference, knowledge and skills, and they learn through interactions with each other (Marley & Greyling, 2010:175-176).

- (iv) Fourthly, a *ba* must have boundaries but these need to be permeable and allow for interaction and the utilisation of opportunities that were not necessarily foreseen. Different *ba*'s can, therefore, connect or interact with each other. The notion of embracing unforeseen opportunities is compatible with PLR, which is viewed as an exploratory journey of discovery that is not controlled or restricted by a predetermined hypothesis.

- (v) Fifthly, participants need to be committed and intrinsically motivated to reaching the objective or goal that the *ba* wishes to achieve. There needs to be a personal

aspiration to contribute and grow within the group context; the task moreover, needs to be challenging (Nonaka *et al.*, 2008:37-38). A theory considered conducive to the aforementioned factors and PLR is Amabile's componential framework of creativity. Amabile (1996:113) distinguishes between three components of creative performance: domain-relevant skills, creativity-relevant processes, and task motivation. Domain-relevant skills include factual knowledge, technical skills and special domain-relevant talent. Creativity-relevant processes include appropriate cognitive style, skills by means of which novel ideas may be generated as well as working style. Task motivation (extrinsic and intrinsic) is concerned with one's attitude towards the task. According to Amabile (1996:95) again, people are most creative when these components intersect; the effective functioning of these components is, however, reliant on a conducive social environment (Marley & Greyling, 2010:175).

Individual autonomy is important in this context. Allowing individual autonomy empowers and motivates individuals to create new knowledge. This often occurs when they see, and feel free to utilise, unexpected opportunities and/or information, thus, motivating them to create and share knowledge. Organisational autonomy allows knowledge to be absorbed and to flow, creating a more flexible system that counters compartmentalisation of knowledge (Nonaka, 1994:18). Furthermore, this connects with Amabile's (1996:231-232) statement that creativity and knowledge creation are supported by freedom in the course of independent decision-making and task completion. Additionally, good project management, sufficient resources, managerial encouragement and enthusiasm and creating an atmosphere free of threatening evaluation are important for knowledge creation. An organisation that promotes knowledge creation should promote new ideas and give sufficient time for exploration, recognition, appropriate feedback and rewards. The above should be imbued with a sense of challenge and urgency (cf. Marley & Greyling, 2010:175).

Therefore, creating *ba* in the context of the TOKC and PLR is a conscious effort to produce spaces conducive to knowledge sharing and knowledge creation. For the

purpose of clarity, I first discuss the four types of *ba* individually before investigating how *ba*, the SECI modes, knowledge assets and the extended epistemology of the participatory paradigms interact.

7.4.1.1 Exercising *ba*

The exercising *ba* is indicative of the internalisation process of converting explicit knowledge to tacit knowledge, achieved by taking the explicit findings back into the practical and experiential arena. In this way, individuals are able to experience the explicit knowledge through tacit events such as hands-on workshops and training sessions. Explicit knowledge is therefore, made available and accessible by means of simulations and experimentation.

7.4.1.2 Originating *ba*

The originating *ba*, akin to socialisation with which it is associated, is considered the initial and originating space of knowledge creation. The aim of this socialisation is to share experiences, feelings and emotions in order to remove the barriers between the self and other members of the group leading to synchronised behaviour and common understanding and trust. From this *ba*, care, trust and commitment arise. Here, the interpersonal sharing of experiences is fundamental to the conversion and transfer of tacit knowledge. In terms of the organisational culture, an open and accommodating design is necessary to the facilitation of the knowledge conversion process (Nonaka & Konno, 1998:46).

7.4.1.3 Interacting / dialoguing *ba*

In the interacting *ba*, later referred to as dialoguing *ba*, a more conscious construction of knowledge occurs (Nonaka *et al.*, 2000:17). Tacit knowledge is made explicit and, thus, understandable by negotiating concepts, common terms and mental models.

Constructive and critical reflective dialogue is the key to this process as it allows individuals to interact, reflect on and analyse the knowledge presented as well as their own mental models. In other words, dialogue allows the individuals to integrate their

mental models and positions in order to gain a common understanding and integrate into the group. An important aspect is the selection of a team or field of interaction that has the right mix of people with specific skills and experience. Often, metaphors and images are used to create mental frames of reference and common understanding for such a team (Nonaka & Konno, 1998:47).

7.4.1.4 Systemic *ba*

The systemic *ba*, previously known as the cyber *ba*, as its former name might indicate, is a virtual rather than real space (Nonaka *et al.*, 2000:17). In this space, knowledge is converted from simple explicit knowledge to more complex forms of explicit knowledge, thus representing the combination knowledge conversion mode. Here, new knowledge and existing knowledge are made available to members of the organisation, allowing a re-contextualisation or re-organisation of existing knowledge to gain new insight. This process, supported by information technologies, databases and group-ware enhances the conversion process (Nonaka & Konno, 1998:47).

In sum, an awareness of the implementations and purposes of the different types of *ba* and their contribution to the knowledge conversion modes may aid the efficiency of and approach to knowledge creation. *Ba*'s and their interactions and relationship with knowledge assets and the SECI model, are discussed in the next section.

7.5 Correlating aspects of the knowledge conversion mechanism and the participatory paradigm

Knowledge assets, the SECI modes and *ba* all have four levels of functioning that correspond and contribute to each other, resulting in effective knowledge management (Figures 7 to ten, 10 in Chapter six). As stated in Chapter four, the extended epistemology of the participatory paradigm is relevant to PLR. Therefore, if the participatory paradigm is a relevant paradigm for PLR and the TOKC then they, by implication, should be synergetic concepts. Consequently, I have added the four knowledge dimensions conceptualised in terms of the extended epistemology of the participatory paradigm indicated in the above interaction. As a result, each level contains

knowledge assets, which are associated with a SECI mode, *ba* and the related knowledge dimension. These aspects are viewed as complementary aspects of one another (cf. Rice & Rice, 2006: 676-678). This interaction is described in more detail below and presented in table format at the end of each level.

- Level one: consists of routine knowledge assets, practical knowledge, internalisation (SECI) and the exercising *ba*.
- Level two: comprises experiential knowledge assets, experiential knowledge, socialisation (SECI) and the originating *ba*.
- Level three: contains conceptual knowledge assets, presentational knowledge, externalisation (SECI) and dialoguing *ba*.
- Level four: consists of systemic knowledge assets, propositional knowledge, combination (SECI) and systemic *ba*.

7.5.1 Level one: Routine knowledge assets, internalisation (SECI), exercising *ba* (TOKC knowledge conversion mechanisms) and practical knowledge (knowledge dimension of the participatory paradigm’s extended epistemology)

Level one consists of the conceptualising and planning stages of a project. At this level, tacit and explicit knowledge have been embodied and ratified to create routines and or methods of functioning. In this context, propositional explicit knowledge is shared through communal experience. Therefore, the exercising *ba* is indicative of the internalisation process of converting explicit knowledge to tacit knowledge, or propositional knowledge to practical knowledge. This is achieved by taking the explicit findings back into the practical and experiential arena by means of workshops, training sessions and demonstrations in which individuals are able to experience the explicit knowledge through tacit events. Once again, the knowledge asset is the routine and the *ba* represents the shared experience of the routine, while knowledge conversion has to do with making the propositional knowledge practical or tacit by internalising it. Table 4 below indicates the relationships discussed above.

Table 4: Level one: Correlating aspects of the knowledge conversion mechanism and the participatory paradigm

Knowledge conversion level one			
Knowledge assets	SECI modes	<i>Ba</i>	Participatory paradigm: Extended epistemology
<p>Routine knowledge assets</p> <p>Grounded in conceptual and systemic knowledge assets.</p> <p>Practical transferability of tacit knowledge via particular action or day-to-day routine.</p>	<p>Internalisation</p> <p>Explicit to tacit exchange: embodied explicit knowledge becomes tacit and is shared by means of practice, such as workshops and demonstrations.</p> <p>Understanding of methods, strategy and innovation and transferred during workshops or training sessions.</p> <p>Transcends the self in order to inform organisational functioning.</p>	<p>Exercising <i>ba</i></p> <p>Space for sharing explicit knowledge that is transferred by means of tacit experience, such as practical workshops.</p>	<p>Practical knowledge</p> <p>Grounded in experiential and propositional knowledge.</p> <p>Practical knowledge is executed as practical skills.</p> <p>Determined by the practitioner's repertoire.</p>

7.5.2 Level two; Experiential knowledge assets, socialisation (SECI), originating *ba* (TOKC knowledge conversion mechanisms) and experiential knowledge (knowledge dimension of the participatory paradigm's extended epistemology)

Knowledge creation starts at level two. It is thus the initial impetus for the knowledge creation spiral. Because tacit knowledge is considered an important resource, an environment needs to be created in which existing knowledge (experiential knowledge assets and experiential knowledge) are utilised by means of a process (socialisation) in an environment or space conducive to the process (originating *ba*). As such, assets, process and space interact and contribute to knowledge creation. It should be noted that certain aspects, such as care, trust and security, are present in knowledge assets, SECI modes and *ba* but are seen in and managed according to the specific context.

Experiential knowledge assets and experiential knowledge are the skills and know-how / expertise that an individual possesses. It is important to audit the knowledge assets as this aids the identification of specific skill sets and, as a result, allows for the building of effective self-organising teams. Knowledge assets are utilised during the socialisation mode/process by means of social interaction and the tacit to tacit knowledge conversion. The aim of socialisation is to facilitate shared experience, feelings and emotions in order to remove the barriers between the self and others. This leads to synchronising behaviour and to common understanding and trust. Here the interpersonal sharing of experiences is fundamental to the conversion and transfer of tacit knowledge. In order for this process to be effective, space needs to be created. The originating *ba*, characterised by initial and on-going socialisation, is such a space. The aim of the *ba*, in terms of socialisation, is to create an environment of care, trust and commitment. In terms of the organisational culture, an open, accommodating design is necessary to facilitate the knowledge conversion process. In this context, individuals realise that they possess knowledge assets, which, in collaboration, may be amplified and are able to contribute to knowledge creation in service of the knowledge vision. Table 5 below is indicative of the discussion above.

Table 5: Level two: Correlation aspects of the knowledge conversion mechanism and the participatory paradigm

Knowledge conversion level two			
Knowledge assets	SECI modes	Ba	Participatory paradigm: Extended epistemology
<p>Experiential knowledge assets</p> <p>Hands-on experience shared between members of an organisation.</p> <p>Trust and the willingness to interact with others.</p> <p>Interpersonal exchange of knowledge.</p> <p>Individual skills and know-</p>	<p>Socialisation</p> <p>Utilisation of shared experience (interpersonal) between individuals, to facilitate tacit to tacit knowledge exchange.</p> <p>Knowledge can be transferred by means of apprenticeships, mentorship and observation.</p>	<p>Originating ba</p> <p>Creating space for shared (interpersonal) experience.</p> <p>The purpose of this <i>ba</i> is to remove barriers between the self and the group, thus creating an environment of care, trust and security.</p>	<p>Experiential knowledge</p> <p>Derived from experiential indwelling and perceptual enactment both individually and in collaboration with others.</p> <p>Stored as memory, feeling and skill.</p> <p>Often exists pre-linguistically (proximal).</p>

<p>how / expertise.</p>	<p>Experience / experiential knowledge assets are primary drivers of this process.</p> <p>This process is formalised by creating self-organising teams that are selected according to the experiential and conceptual knowledge assets.</p> <p>These teams should provide an environment of care, trust and security.</p>		
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7.5.3 Level three: Conceptual knowledge assets, externalisation (SECI), dialoguing *ba* (TOKC knowledge conversion mechanisms) and presentational knowledge (knowledge dimension of the participatory paradigm's extended epistemology)

The knowledge created in this context is more formalised and represents mental models and concepts by means of images, symbols, designs and brand equity. In this context, design and branding are informed by and indicative of the organisational knowledge vision. The knowledge vision helps to guide the type of knowledge to be created in the externalisation process. In other words, the conceptual knowledge assets and presentational knowledge help to create shared context and understanding and direct the type of explicit knowledge to be gleaned from the tacit knowledge dimension. Dialoguing *ba*'s are creating space and context for the conscious construction of knowledge. Tacit knowledge is made explicit and thus understandable by negotiating the understanding of concepts, common terms and mental models. As seen in the Table 6 below, constructive, critical dialogue and the integration of metaphors (which manifest as presentational knowledge) are used in this phase to better understand and communicate knowledge.

Table 6: Level three: Correlating aspects of the knowledge conversion mechanism and the participatory paradigm

Knowledge conversion level three			
Knowledge assets	SECI modes	Ba	Participatory paradigm: Extended epistemology
<p>Conceptual knowledge assets</p> <p>Grounded in experiential knowledge assets.</p> <p>Conceptual knowledge expressed/articulated through images or symbols.</p> <p>This knowledge asset is informed by theory but can be presented as metaphor and aesthetic creation.</p> <p>Includes the notion of branding as a conceptual framework for participants.</p>	<p>Externalisation</p> <p>Converting the tacit knowledge surfaced during socialisation to more explicit knowledge, such as words or images. As such, metaphor and images are often used to articulate the tacit, personal dimension into more understandable ideas.</p> <p>Concepts are interrogated and re-conceptualised by means of meaningful dialogue to facilitate shared context and understanding.</p>	<p>Interacting / Dialoguing ba</p> <p>A shared space in which a more conscious construction of knowledge occurs.</p> <p>Tacit knowledge is made explicit by negotiating concepts, common terms and mental models.</p> <p>Metaphors and images are used to create common mental frames of reference.</p>	<p>Presentational knowledge</p> <p>This type of knowledge is grounded in experiential knowledge.</p> <p>Involves the cognisance of patterns of meaning derived from experiential knowledge.</p> <p>Invites imaginative interpretations and investigations.</p>

7.5.4 Level four: Systemic knowledge assets, combination (SECI), cyber or systemising *ba* (TOKC knowledge conversion mechanisms) and propositional knowledge (knowledge dimension of the participatory paradigm's extended epistemology)

The knowledge conversion mode at this level is combination, which entails the combination and reconfiguration of systematic knowledge assets and propositional knowledge into new and often more complex explicit knowledge. It should be noted that this could also involve unpacking and demystifying existing knowledge. In this context, the explicit knowledge created on level three needs a place of residence, which will include databases, documents and even patents and licenses. Therefore, systemic knowledge assets are used to store and retrieve propositional knowledge, which is explicit by nature.

In this sense, the space or *ba* is a virtual rather than real space. Here, new knowledge and existing knowledge are made available to members of the organisation, allowing a re-contextualisation or re-organisation of existing knowledge to gain new insight (Nonaka & Konno, 1998:47).

While the knowledge assets are the propositional knowledge and storage systems, *ba* is the systemic space (the systems) that allows and promotes access and interaction, and the conversion mode is the combination and reconfiguration of available explicit knowledge. Table 7 presented below gives an overview of this level.

Table 7: Level four: Correlating aspect of the knowledge conversion mechanism and the participatory paradigm

Knowledge conversion level four			
Knowledge assets	SECI modes	Ba	Participatory paradigm: Extended epistemology
<p>Systemic knowledge assets</p> <p>Grounded in experiential and conceptual knowledge assets.</p> <p>Codified systematic, explicit knowledge, language-based statements.</p> <p>Unambiguous communication.</p>	<p>Combination</p> <p>Explicit to explicit knowledge exchange and conversion. This is a further development of the externalisation process.</p> <p>Converting explicit knowledge into new, more interrogated explicit knowledge.</p> <p>Knowledge is reconfigured</p>	<p>Systemic <i>ba</i></p> <p>Space in which the conversion of explicit knowledge can be converted into knowledge that is more explicit</p> <p>In this context, space can refer to databases that make knowledge available.</p> <p>Systems for the rationalisation and justification of knowledge,</p>	<p>Propositional knowledge</p> <p>Language-based statements that use theoretical constructs.</p>

	and recombined. This process relies on conceptual and systemic knowledge assets.	such as peer review processes, are also regarded as systemic <i>ba</i> .	
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7.6 Conclusions

As stated in the introduction, the aim of this chapter was to explicate the conceptual foundation for the discussion of the management phases (cf. Chapter two) of the TBP project, which is presented in the next chapter. In order to address this aim, the knowledge conversion mechanisms and the corresponding knowledge dimensions of the participatory paradigm were discussed. It was argued that knowledge assets, the SECI modes and *ba* can be separated into four levels that correspond with the four knowledge dimensions of the extended epistemology of the participatory paradigm. The four levels identified are, therefore, considered conceptual tools, which are utilised to discuss the four management phases of the TBP project. In other words, the contention is that the four levels of knowledge conversion and the four management phases of the TBP project correspond. The next chapter explores this line of argument.

**CHAPTER EIGHT: *TRANSGRESSIONS AND BOUNDARIES OF THE PAGE*:
PROJECT ANALYSIS BY MEANS OF THE THEORY OF
ORGANISATIONAL KNOWLEDGE CREATION****8.1 Introduction**

In the previous chapter, the knowledge conversion mechanisms were investigated and grouped into four levels. Thereafter, the relationship between these four levels of knowledge conversion mechanisms and the four knowledge modalities of the extended epistemology of the participatory paradigm were discussed. The aim of this chapter is to investigate the possibility of applying the theory of organisational knowledge creation (TOKC) to the management of multi practitioner arts-related PLR projects. An analysis of the *Transgressions and Boundaries of the Page* (TBP) project is conducted in service of this aim.

Therefore, this chapter addresses the third research question posed in Chapter one: How does the analysis of the TBP project show evidence of and establish the possibility that the theory of organisational knowledge creation could be an appropriate management model for multi-practitioner arts-related PLR research projects?

To be able to answer this research question, the four knowledge conversion levels conceptualised in Chapter seven are used to analyse the four management phases of the TBP project discussed in Chapter two. The correlations between the levels and phases that are used to guide the discussion in this chapter are indicated below.

<p>Phase one of the TBP project: conceptualisation, planning and preparation (August 2008 to March 2009). This phase is analysed according to level one (explicit to tacit knowledge conversion), routine knowledge assets, internalisation (SECI), exercising <i>ba</i> (TOKC knowledge conversion mechanisms) and practical knowledge (the participatory paradigm's extended epistemology).</p>

Phase two of the TBP project: knowledge creation (March 2009 to January 2010). The analysis of this phase is carried out according to **level two (tacit to tacit knowledge conversion)**, **experiential knowledge assets**, **socialisation (SECI)**, **originating *ba*** (TOKC knowledge conversion mechanisms) and **experiential knowledge** (extended epistemology of participatory paradigms).

Phase three of the TBP project: knowledge presentation and communication (February 2010 to July 2010). This phase is analysed in terms of **level three** (tacit to explicit knowledge conversion), **conceptual knowledge assets**, **externalisation (SECI)**, **dialoguing *ba*** (TOKC knowledge conversion mechanisms) and **presentational knowledge** (extended epistemology of participatory paradigms).

Phase four of the TBP project: formalisation and dissemination of knowledge (July 2010 to December 2011). This phase is analysed with regard to **Level four** (explicit to explicit knowledge conversion), **systemic knowledge assets**, **combination (SECI)**, **cyber or systemising *ba*** (TOKC knowledge conversion mechanisms) and **propositional knowledge** (extended epistemology of participatory paradigms).

Consequently, the chapter is divided into four sections in which the management phases of the TBP project and the four knowledge conversion levels are correlated and discussed. The different levels and phases used to discuss the TBP project are a pragmatic categorisation to clarify salient aspects of the project. Nonetheless, it is acknowledged that some overlapping will occur. Therefore, the different levels and phases are not viewed as isolated. The transitions between levels and phases are thus viewed as intermediate zones of interaction. It is important to reiterate that the TOKC was not fully understood or integrated into the management of the TBP project at the time it was conducted and that this study does not discuss the TBP project as an example of the application of the TOKC. Rather, the purpose of this research is to identify the emergence of salient aspects of the TOKC in order to investigate the possibility of applying this management model to future projects of this nature.

However, before exploring the four levels and phases, it is necessary to briefly recap significant aspects of the TBP discussed in Chapter two. Consequently, in the next section the research objectives and provisions of the TBP project, as presented in Chapter two, are repeated here. Additionally, Table 8 below (pages) is included in order to summarise and recap the discussion of the TBP project.

8.2 Brief overview of the *Transgressions and Boundaries of the Page* project

The basic methodological approach to the TBP project was to invite a group of creative practitioners to create artworks for a travelling artists' book exhibition. These artworks were documented and discussed during various walkabouts, colloquia and workshops in order to produce accredited research articles (cf. Chapter two). The specific research objectives were to:

- create a space for creative practice across disciplines to engage in PLR;
- utilise the creative group dynamics of such a project to stimulate interdisciplinary research practice;
- enable practitioners to understand the notion of PLR and thus formalise their practice more purposefully as research;
- allow for critical reflection and evaluation of the research approach/structure with a view to producing accredited research articles;
- enhance participants' understanding of the diverse approaches, applications and conceptualisation of PLR, with a view to their contributing to the current national and international debate on the status and nature of PLR.

Additionally, provision was made for:

- artists who wanted to pursue their creativity by making an artist's book;
- artists who wished to do research on their own creative practice by means of PLR;
- researchers who desired to reflect on the creative process, concepts and results of creative practice;
- collaboration between artists and researchers, to the mutual benefit of both.

Furthermore, the project aimed to establish an accommodating and trusting research culture amongst members from the participating disciplines of History of Art, Graphic Design and Creative Writing in the Faculty of Arts at the Potchefstroom Campus of the NWU.

As mentioned in Chapter two, the artist's book was selected as an overarching theme, because this genre allows and encourages the innovative interplay between image and text. Additionally, artist books tend to challenge and extend the traditional codex of the book. Consequently, the artist book was viewed as a theme that would allow artists from diverse backgrounds to engage in creative and innovative exploration that would facilitate PLR.

As stated in Chapter one and two, this is a post-project reflection on and analysis of the TBP project. The project description presented in Chapter two was extrapolated from personal experience and memory; discussions with other project members and project related documents, such as funding proposals and minutes of meetings. Additionally, project journals kept by Prof S.F. [Franci] Greyling (2009-2011) proved very useful in this regard, as they are a record of routine events and occurrences that are often forgotten.

As is often the case in multi-practitioner PLR, the extensive nature of this project resulted in the project leaders being required to fulfil multiple roles. Firstly, they acted as creative practitioners (this implies participating in the production of creative work and research material). Secondly, they were self-observers who engaged reflection-in-action and reflection-on-action, both individually and through social interaction with others. Thirdly, they managed, facilitated, and acted as researchers by writing accredited articles (Gray & Malins, 2004:20).

In the following section, phase one will be discussed according to level one of the knowledge conversion mechanisms.

Table 8: Overview of the phases of the *Transgressions and Boundaries of the Page* project

Phase one: conceptualisation, planning, and preparation (August 2008 - March 2009)	
Activities	Results
Identification of theme	Artist's book as area of exploration (theme). Title: <i>Transgressions and Boundaries of the Page (an interdisciplinary exploration of a practice-led research project by means of the artist's book)</i> .
Project conceptualisation	Research proposal Research problem identification, rationale and motivation, project description, research aims and objectives, research methodology, work plan and budget. Application for National Research Foundations <i>Blue Skies Funding Proposal</i> , October 2008
Identification of participants	Invitation was sent to selected participants: Upcoming and established artists within the fields of visual arts (fine artists, graphic designers, illustrators) and creative writing (poets, novelists, children's book authors), as well as in the related fields of architecture and language technology. Researchers in the History of Art subject groups as well as those in the School of Languages and Music. Researchers from other institutions such as the Universities of Johannesburg and Pretoria. <i>Tambani</i> community project (based in Venda) and the <i>Karos & Kambro Youth Development Organisation</i> .
Project launch preparation	Launch related administration and the conceptualisation of the project launch programme.

Conceptualisation of social media activations	Conceptualisation and design of webpage prototype
Design of corporate identity	Corporate identity design

Phase two: knowledge creation (March 2009 - January 2010)	
Activities	Results
Project launch	<p>Explanation of the project's project aims and objective.</p> <p>Contextualising the notions of PLR and artist's books.</p> <p>Initiating collaborative interaction.</p> <p>Explanation of proposed social media and activations.</p> <p>Video and photographic documentation of project launch.</p>
Individual and collaborative creative production	The creation of artist books for the exhibition.
Documentation of artist books	Photographic documentation of artist books.
<p>Bookbinding workshop was presented by S. (Stephan) Erasmus (a pre-eminent book artist)</p> <p>Creative writing and book-making workshop: <i>Karos & Kambro Youth Development Organisation</i></p>	These two workshops were designed as a collaborative learning opportunity that would enhance the production of artist books.
Social media activations	Conceptualisation and design of webpage prototype. This webpage (www.bookboek.co.za) eventually went online in July 2009 and an additional Facebook group was created. These social media platforms were periodically updated during the course of the project.

Preparation for exhibition	<p>Preparation of festival programme information and press releases.</p> <p>Preparation of exhibition related material such as exhibition poster, artist book labels and artists statements.</p> <p>Packaging and transport arrangements of the exhibition</p>
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Phase three: knowledge presentation and communication (February 2010 - July 2010)	
Activities	Results
Exhibitions	<p>Stellenbosch <i>Woordfees</i> (1-6 of March 2010).</p> <p>NWU Gallery in Potchefstroom (15April-13 May 2010).</p> <p>Faculty of Art, Design and Architecture Gallery at the University of Johannesburg (2-30 July 2010).</p>
Exhibition walkabouts	Various walkabout discussions were held with members of the public and students in Stellenbosch, Potchefstroom and Johannesburg.
Exhibition related presentations	Two presentations were given at the word festival: <i>TBP: Artists in discussion</i> (Van der Merwe, Marais, Meiring, Greyling & Marley).and <i>Creative research projects: how is it possible?</i> (Greyling & Marley) in the J. S. Gericke library auditorium at Stellenbosch university.
Research related meeting in the NWU gallery	Meetings were held in the NWU Gallery with the History of Art, Graphic Design and Creative Writing subject groups in order to

	<p>initiate discussion and to identify possible research themes. Additionally, participants were encouraged to write informal articles to be included in an exhibition print catalogue.</p>
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Phase four: formalisation and dissemination of knowledge (July 2010 to December 2011)	
Activities	Results
A colloquium concerning the NWU research focus and the strategic plan for the then emergent Research Niche.	<p>The contextualisation of the institutional and emergent Research Niche’s strategic plan and objectives for participants.</p> <p>Communication of the emergent Research Niche’s strategic plan and objectives to top management.</p> <p>Framing PLR as a viable research approach within the NWU context.</p>
A series of three weekly research meetings	All of these research activities were designed to product articles for the special addition of the journal <i>Literator</i> (2012:1[33]).
An academic writing workshop	
TBP project colloquium	The development of research skills.

8.3 Analysis of phase one of the *Transgressions and Boundaries of the Page* project by means of level one of the knowledge conversion mechanisms (explicit to tacit knowledge conversion)

Phase one of the TBP project was the conceptualisation, planning and preparation part of the project. It involved clarifying the concept and research approach of the project; writing research and funding proposals; identifying appropriate resources and participants; the design of a visual identity; drafting communication and the organisation of the project launch (cf. Chapter two).

Phase one of the TBP project is considered a level one aspect and, as such, correlates with level one knowledge conversion mechanisms (routine knowledge assets, internalisation SECI modes and exercising *ba*) and the participatory paradigm (practical knowledge)., the TBP project is discussed in the subsequent section according to the above-mentioned knowledge conversion mechanisms. The table (Table 9.) below provides an overview of the discussion to follow.

Table 9: Consolidated knowledge conversion mechanisms: level one

Level one: Knowledge conversion			
Phase one of the TBP project: conceptualisation, planning and preparation (August 2008 - March 2009)			
Knowledge assets	SECI modes	<i>Ba</i>	Participatory paradigm: Extended epistemology
<p>Routine knowledge assets</p> <ul style="list-style-type: none"> • Grounded in conceptual and systemic knowledge assets. • Practical transference of explicit knowledge (which becomes tacit) via particular action or day-to-day routines. 	<p>Internalisation</p> <ul style="list-style-type: none"> • Explicit to tacit exchange: embodied explicit knowledge becomes tacit and is shared through practice, such as workshops and demonstrations. • Understanding of methods, strategy and innovation transferred during workshops or training sessions. • Transcends the self in order to inform organisational functioning. 	<p>Exercising <i>ba</i></p> <ul style="list-style-type: none"> • Space for sharing explicit knowledge that is transferred by means of tacit experiences, such as practical workshops. 	<p>Practical knowledge</p> <ul style="list-style-type: none"> • Grounded in experiential and propositional knowledge. • Practical knowledge is executed by means of practical skills. • Determined by the practitioner’s repertoire.

8.3.1 Knowledge assets: routine knowledge assets

Routine knowledge assets are grounded in conceptual and systemic knowledge assets (cf. Chapters six and seven). In the knowledge management context, routine knowledge incorporates *kata*, which encourages the improvement and innovation of routines based on observation (Nonaka *et al.*, 2008:43; cf. Chapter seven). *Kata* essentially involves the critical evaluation of a task in order to develop more appropriate routines or methods of execution. The freedom to innovate routines is advantageous for both individual self-actualisation and effective organisational functioning on the condition that it is in line with the knowledge vision of the institution. This correlates with the notions of reflection-in-action and reflection-on-action, which are fundamental to PLR (cf. Chapters three and five). Like *kata*, the aims of reflection-in-action and reflection-on-action are to move from the present state of a particular situation or problem to a desired state or problem solution, by means of critical re-evaluation (Schön, 1983:54; 1987:25-26).

In terms of phase one of the TBP project, routine knowledge assets are evident in the learning derived from the *Tracking Creative Creatures* (TCC) project. The TCC project was critically evaluated in order to understand and improve the management of multi-practitioner arts-related PLR projects conducted at the NWU's Potchefstroom Campus. This critical evaluation is evident in the following articles discussed in Chapter two:

- *Tracking Creative Creatures: an interdisciplinary investigation into the creative process: project description* (Greyling & Marley, 2009:1-30)
- *Tracking Creative Creatures in a research context* (Combrink & Marley, 2009:177-205)
- *Tracking Creative Creatures project: negotiating space for interdisciplinary practice-led research at the North-West University* (Marley & Greyling, 2010:169-182)

This critical evaluation of the TCC project informed the planning and execution of the TBP project in that it provided a type of trial run from which learning was derived. This process of learning, and adapting accordingly, demonstrates that the development and management of knowledge assets is a dynamic, constantly evolving process. In the university context, this process is often embedded in the

production of research. The success of the TCC project affirmed that multi-practitioner arts-related PLR projects promote creative practice and deliver formal research. Additionally, it provided a tentative management model for further evaluation, as well as a procedural and strategic approach to such projects (Combrink & Marley, 2009:177-205). The way in which the TCC project was conducted was shared with other participants, providing a contextual background and procedural model for future projects. The following realisations were important and informed the planning and execution of the TBP project.

- The realisation that such projects could be designed to move from the tacit to the explicit knowledge dimension was significant, and this informed the procedural approach for future projects. This approach was further informed by our growing understanding of PLR.
- The understanding that both the tacit and explicit knowledge dimensions needed to be communicated, in order to provide a holistic picture of knowledge, influenced the documentation and dissemination of the creative production. Accordingly, the principle of presenting the creative and textual research outputs in tandem, where possible, was established.
- Additionally, the value of using branding principles to coherently and effectively communicate the project vision, was made use of. This aspect was significantly improved upon during the TBP project with the inclusion of a webpage and related social media.
- An understanding that PLR is an exploratory journey that should allow for unforeseen developments meant that the management approach for the TBP project was open and accommodating. Hence, fun and play were integral to the management approach and creation of the work. The notion of an exploratory journey is also evident in the branding (logo) and title of the TBP project. The Rorschach test, used as inspiration for the logo, implies that a multitude of readings is possible, while the title invites participants to transgress into new areas of investigation (cf. Chapter two).

As mentioned in Chapter two, certain critical shortcomings were identified in the TCC project and were addressed in the TBP project. Consequently, these shortcomings may be viewed as routine knowledge assets that informed procedural improvement and innovation. The issues involved were:

- An undefined working understanding, and/or a definition of knowledge and the way in which tacit knowledge contributes to the academic research context. During the TBP project, there was a clearer understanding of PLR and the tacit knowledge dimension and this facilitated the comprehensive documentation of the creative production. However, this issue remained problematic in the TBP project because the project managers had not yet realised the importance of identifying a research paradigm specifically suited to PLR. At this time, most of the research was framed within the critical theory paradigm, which did not necessarily accommodate the nature of PLR in its entirety;
- The need for a deeper theoretical understanding of the management of projects. The lack of understanding regarding the managerial complexities of multi-practitioner arts-related PLR projects in the academic context therefore motivated the current study. Accordingly, both the TCC and the TBP projects are viewed as routines that are being evaluated in order to facilitate better operational execution in the future;
- The need to lay a theoretically grounded foundation that is more robust for projects of this nature was also identified as an area requiring attention. Consequently, the project proposal written for the TBP project had a more rigorous and focused theoretical foundation based on the notion of PLR (Appendix one). Additionally, the History of Art subject group, which made a significant contribution to the TCC project, was included from the outset of the project (Marley & Greyling, 2010:171). This facilitated a more thoroughly conceived theoretical depth and improved collaborative possibilities. In this context, the routine knowledge assets that are indicative of these disciplines were of assistance when writing funding proposals and formalising research.

Therefore, in terms of the conceptualisation, planning, and preparation of the TBP project, routine knowledge assets were derived from the TCC project and informed the TBP project's practical execution. As a result, the notion of critical evaluation and innovation, which are characteristic of both reflective practice (cf. Chapter three) and routine knowledge assets (cf. Chapter seven), was utilised. It should be noted that routine knowledge and the innovation that occurs is grounded in experience or experiential knowledge. Consequently, knowledge assets are not viewed as isolated. This is because the conceptualisation, planning, and preparation process of any project necessitates the identification of knowledge assets that will be used in the later phases of the project. For example, it is advisable to identify people with particular conceptual knowledge assets at the outset of a project, although the said assets may only come into play during the later stages of this project. In the next section, internalisation, which is related to routine knowledge assets as a level one aspect, is discussed as part of phase one of the TBP project.

8.3.2 SECI modes: Internalisation

Internalisation, in the context of the TBP project, is considered the initial SECI mode. During internalisation, explicit knowledge is converted into tacit knowledge and shared on an organisational level. This process entails the internalisation and exploration of explicit knowledge by means of practice. The explicit knowledge specific to the internalisation and exploration cycles within a project is identified in and acquired from the body of explicit knowledge generated during previous externalisation and combination processes (SECI modes).

Firstly, explicit knowledge is identified, explored, and embodied by means of action and practice, which leads to an understanding of methods, strategy, processes and innovation. Secondly, this embodied knowledge initiates a further process of learning by means of practical execution. In other words, concepts and theories are formulated through trial and error. This process relies heavily on reflective practice as a method of understanding and improving the situations, problems or issues under review (cf. Chapter three). The type of knowledge that is created is referred to as operational (tacit) knowledge (Nonaka *et al.*, 2000:11; Nonaka & Takeuchi, 1995:238).

In terms of the TBP project, the operational knowledge was derived from the TCC project. The experience gained during the latter was embodied and theorised by means of the above-mentioned articles in order to develop a strategic managerial approach for multi-practitioner arts-related PLR projects; in essence, the identification and acquisition of explicit knowledge. This knowledge was then internalised and further explored through practice in the form of the conceptualisation, planning, and execution of the TBP project.

The most significant article in this regard was *The Tracking Creative Creatures project: negotiating space for interdisciplinary practice-led research at the North-West University* (Marley & Greyling, 2010:169-182). In this article, the idea of space for PLR within the traditional academic environment/context is discussed according to the following concepts: the institutional research space/context; conceptual space and positioning (branding); space that promotes creativity; space for collaboration and knowledge management; and space for knowledge generation, communication and dissemination.

This theoretical exploration also informed the writing of research and funding proposals for the TBP project. The experience of the TCC project also informed other aspects of the TBP project, such as the conceptualisation of the project launch, documentation of the creative outputs and the formalisation of research. The analysis and theorisation of the TCC project was instrumental in providing a foundation for future projects (Marley, 2012:12). This meant that the understanding and experience regarding PLR and project management that was gained during the previous project were internalised. This process informed the management of the TBP project in terms of methods, strategy, routines and processes. The TCC project established the functioning and routines for a self-organising team within the NWU context. As mentioned, a self-organising team in the knowledge management context is a group of individuals with diverse skills that are brought together by middle managers to explore a particular idea or solve a given problem (cf. Chapters six and seven).

The management teams of these multi-practitioner arts-related PLR projects at the NWU are viewed as middle-up-down managers who are negotiating a place for PLR in the institutional context. They balance the needs of creative practitioners and

traditional institutional research requirements. The purpose is to challenge the current dominant logic, which prioritises purely explicit research outcomes, by presenting an alternative approach, namely multi-practitioner arts-related PLR projects. The team provides a shared space and context of experience and trust while focussing members on the task at hand (Nonaka, 1994:19), which brings us to the notion of *ba*.

8.3.3 *Ba*: Exercising *ba*

The exercising of *ba*, which is considered a level one aspect, is indicative of the internalisation process of converting explicit knowledge to tacit knowledge, or propositional knowledge to practical knowledge. This is achieved by taking the explicit findings back into the practical and experiential arena. The discussion and interaction of the management team and other participants in the TCC project, and the subsequent phase one of the TBP project, allowed a space where one's limited perspective was transcended. In this context, rationality and intuition were employed during the conceptualisation and planning as well as preparation of the latter project.

Prof S.F. [Franci] Greyling and Ian Marley were the primary individuals involved in the theorisation and management of the TCC project and the development of procedural approaches for the TBP project. These procedures were communicated to other staff members and participants by means of meetings and research colloquia.

As in the case of formal research (Scrivener, 2009:70-71), a *ba* must be driven by intent (Nonaka *et al.*, 2008: 37-38). Per sé, the self-organising team must formalise and communicate this intent. In terms of the TBP project, this intent was formalised in the research proposal. However, it is important to note that, in line with PLR, the intent was framed as the exploration of a theme that could be approached from tangential perspectives. There was no predetermined hypothesis. Rather, the intent to explore the PLR possibilities was inherent to the creation of an artist's book (cf. Chapters two and five). This accommodated the notion that, according to Nonaka *et al.* (2008: 37-38; cf. Chapter six), a *ba* should have permeable boundaries, which allows for interaction with others.

Therefore, in terms of the exercising of *ba*, theoretical knowledge that was derived from the TCC project was internalised by the management team and utilised to create procedures and routines, which informed the practical conceptualisation, planning, and preparation of the TBP project.

This brings us to the particular knowledge dimension coupled with phase one of the TBP project and associated with level one of the knowledge conversion mechanisms: namely, practical knowledge.

8.3.4 Participatory paradigm: Extended epistemology: practical knowledge

As discussed in Chapter four, practical knowledge (which is grounded in experiential and propositional knowing) is the ability to execute a particular practical skill (Heron & Reason, 1997:281). This is related to the notion of understanding how to execute a task and is enhanced by experience and the integration of theoretical constructs. In the above discourse, it was explained that the planning, conceptualisation and preparation of the TBP project was informed by the “know how” derived from the TCC project. Experiential and propositional knowledge were manifested in the practical implementation of the TBP project.

Chapter seven addressed the interrelatedness of routine knowledge assets, internalisation (SECI mode), exercising *ba* and practical knowledge as level one aspects. The above discussion illustrates how these knowledge conversion mechanisms and the related knowledge dimension of the participatory paradigm may be identified in the execution of phase one of the TBP project. All of these processes facilitate the conversion of explicit knowledge to tacit knowledge. The next section is concerned with level two of the knowledge conversion mechanisms and phase two of the TBP project.

8.4 Analysis of phase two of the *Transgressions and Boundaries of the Page* project by means of level two of the knowledge conversion mechanisms (tacit to tacit knowledge conversion)

Phase two of the TBP project is considered the knowledge creation phase. This phase of the project consisted of the implementation of the project launch, the organisation and execution of practical workshops, the organisation and coordination

of community development aspects of the project and the production of creative outputs. This phase of the TBP project is, moreover, associated with experiential knowledge assets, socialisation (SECI mode), initiating *ba* and experiential knowledge and is, therefore, regarded as a level two aspect. Tacit to tacit knowledge conversion is the primary concern during this level and phase. Table 10, below, offers an overview of the interacting aspects of level two and phase two, as presented in the discussion that follows it.

Table 10: Consolidated knowledge conversion mechanisms: level two

Level two: Knowledge conversion			
Phase two of the TBP project: knowledge creation (March 2009 - January 2010)			
Knowledge assets	SECI modes	<i>Ba</i>	Participatory paradigm: Extended epistemology
<p>Experiential knowledge assets</p> <ul style="list-style-type: none"> • Hands-on experience shared between members of an organisation. • Trust and the willingness to interact with others. • Interpersonal exchange of knowledge. • Individual skills and know how. 	<p>Socialisation</p> <ul style="list-style-type: none"> • Utilisation of shared experience (face to face) between individuals to facilitate tacit to tacit knowledge exchange. • Knowledge may be transferred by means of apprenticeships, mentorship and observation. • Experience / experiential knowledge assets are 	<p>Initiating <i>ba</i></p> <ul style="list-style-type: none"> • Creating space for shared (face to face) experience. • The purpose of this <i>ba</i> is to remove barriers between the self and the group, thus creating an environment of care, trust and security. 	<p>Experiential knowledge</p> <ul style="list-style-type: none"> • Derived from experiential indwelling and perceptual enactment, both individually and in collaboration with others. • Stored as memory, feeling and skill. • Often exists pre-linguistically (proximal).

	<p>primary drivers of this process.</p> <ul style="list-style-type: none"> • his process is formalised by creating self-organising teams that are selected according to their experiential and conceptual knowledge assets. • these teams should provide an environment of care, trust and security. 		
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8.4.1 Knowledge assets: Experiential knowledge assets

Experiential knowledge assets are considered hands-on experiences shared between members of an organisation and are grounded in practical and conceptual knowledge assets. Experiential knowledge assets are tacit in nature; therefore interaction and collaborative learning with others are often used to harness this type of knowledge. This necessitates the transcendence of the self through interaction with others in order to address the issues at hand (cf. Chapter seven). Consequently, experiential knowledge assets are human capital that are utilised in a self-organising team (Nonaka *et al.*, 2000: 21). In practical terms, this means selecting a team of individuals with the necessary experiential knowledge to create new knowledge by means of interaction.

As stated in Chapters five and seven, PLR is often a collaborative activity in which individuals from different disciplines and worldviews interact and learn from each other and, in the process, create new knowledge (Brown & Sørensen, 2009:159). Consequently, the utilisation of experiential knowledge assets involves the coordination of potential knowledge creation opportunities. In the knowledge management and the PLR contexts, these self-organising teams are guided by intent, as opposed to hypothesis.

The management approach and design of the TBP project evidences the effective utilisation of experiential knowledge assets in that participants were selected from a variety of disciplines in order to explore the artist's book. As mentioned in Chapter two, participants were selected from the fields of Fine Arts, Graphic Design, Illustration and Creative Writing (poetry, novelists, and children's book authors), as well as architecture and language technology. The History of Art and Literary Studies subject groups at the NWU were also included from the outset in order to create potential research opportunities. Additionally, an equitable balance existed between participants who were familiar with the artist's book genre and others who would produce an artist's book for the first time.

Furthermore, the management team consisted of members from the History of Art, Graphic Design, and Creative Writing subject groups at the NWU, Potchefstroom Campus. In this manner, the potential for contributions from both practical and

theoretical disciplines was established. Furthermore, participants from different educational institutions were invited to participate in order to facilitate collaborative opportunities. In this regard, artists and researchers from the University of Johannesburg; the University of Pretoria; the University of the Free State and Tshwane University of Technology as well as Vega, the Brand Communication School (in Johannesburg), were involved. The TBP project was correspondingly positioned as an interdisciplinary exploration of a PLR project by means of the artist's book. This positioning allowed and made space for a multitude of creative outputs and related research possibilities (Marley, 2012).

Some participants (particularly those researchers from the History of Art subject group) were selected for their conceptual knowledge assets, which came into play during levels three and four of the knowledge conversion process (as discussed later in this chapter). In this context, conceptual knowledge assets refer to the conceptual knowledge that is held by an individual and utilised to formalise research findings in textual formats.

The selection of participants was guided by the first research objectives discussed earlier: to create a space for creative practice across disciplines that could facilitate an engagement with PLR or serve as research data with which formal research could be conducted. The catalyst for the utilisation of experiential knowledge assets and the attainment of the research objective in phase two of the TBP project is social interaction, which brings us to the next knowledge conversion mechanism: socialisation.

8.4.2 SECI modes: Socialisation

As mentioned in Chapter seven, socialisation is the process of utilising shared experience and converting it into tacit knowledge. In other words, experiential knowledge assets are used in the socialisation process by means of social interaction in the interest of facilitating tacit to tacit knowledge conversion/exchange. The purpose of socialisation is to facilitate shared experience, feelings and emotions in order to remove the barriers between the self and others. This leads to synchronising behaviour and common understanding and camaraderie; fundamental to effectively exploring the issue at hand. Here, the interpersonal (face-to-face)

sharing of experience is fundamental to the conversion and transfer of tacit knowledge.

The first step in the socialisation process comprises the activation of a self-organising team. This team should have an appropriate degree of flexibility that allows for imaginative thinking, problem searching, and problem solving. The purpose of a team is to create a place and social context in which personal perspectives and knowledge may be articulated and shared and in which conflicts may be resolved and reconceptualised into higher-order concepts. The creation of self-organising teams could be an institutional initiative or, as in the case of the TBP project, be initiated on their own by members of an institution. In either context, the purpose of the team must be to contribute to the organisational vision (cf. Chapter six).

As described in Chapter two, the launch of the TBP project took place on the 4th of March 2009 with fifty-five people in attendance, forty-three of whom were artists or researchers. The Dean of the Faculty of Arts, Prof Jan Swanepoel, opened the project proceedings. After this, Ian Marley gave a brief overview of the previous TCC project and explained the research objectives of the current TBP project. The previous project thus served as a model and example of what it was hoped would be achieved. It was, however, emphasised that creative practitioners were under no obligation to take part in the research process. The following two presentations by Prof John Gouws (*A brief history of the book*) and David Paton (*Towards an understanding of what a South African artist's book may be*) served to contextualise and orientate the participants with regards to the genre of the artist's book. Thereafter, Louisemarié Combrink presented a paper on practice-led research, followed by Prof (S.F.) Franci Greyling, who expounded on the making of, learning and research that was derived from the creation of her artist's book, *Avontuur*, which was produced for the TCC project (Greyling, 2009a). C.E. [Wessie] Van der Westhuizen demonstrated a prototype of the envisioned webpage to participants. We requested all participants to send us short curriculum vitae, an artist's statement and a recent photograph of themselves for the webpage. Finally, a dialogue session led by Greyling and Marley was held during which participants were encouraged to ask questions and discuss new ideas (Marley, 2012:13).

As may be deduced, the TBP project launch was conceptualised and conducted mainly as a social activity during which artists and researchers could meet and exchange ideas. The explanation of the knowledge vision, and the framing of the project within the notion of PLR, created a shared context. The programme made provision for sufficient opportunity to interact on a social level, share ideas and concepts and set up collaborative interaction (cf. Marley, 2012:13; Chapter two). Therefore, the commencement of the tacit knowledge exchange in tandem with the launch, which resulted in various collaborative exchanges, may be regarded as having occurred at this point in time. These interactions, described below, ranged from informal discussions to more formal workshops and collaborative creative production.

In terms of formal group interactions, one of the concepts that originated at the launch was the presentation of a two-day bookbinding workshop by Stephen Erasmus for the project participants, at the NWU, Potchefstroom Campus on the 5th and 6th of June 2009. Participants were provided with a theoretical background as well as hands-on practical skills and experience. Additionally, Erasmus gave advice on the books that participants had conceptualised or were already working on. His experience and knowledge allowed participants to become aware of new technical and conceptual possibilities. As stated in Chapter two, various group discussions and demonstrations contributed to the notion of collaborative knowledge sharing. The skills learned during this two-day workshop manifested in the books produced for the final exhibition (Marley, 2012:13).

An additional collaborative workshop was the creative writing and bookmaking workshop that was undertaken with members of *Karos & Kambro Youth Development Organisation* during September 2009, and was presented by South African artists Flip Hattingh, Annaretha Combrink and Prof (S.F.) Franci Greyling to twenty previously disadvantaged teenagers. The bookmaking process served as a vehicle for self-expression and was intended to stimulate creativity as well as to develop technical skills.

Production of artists' books took up the remainder of 2009.. The tacit knowledge gained in the process included both individual production and collaborative efforts,

and occurred in various ways. In terms of collaborative artist's books produced for the exhibition, three noteworthy examples are *The Greedy Hippo*, *Ad Hominem* and *Verneukpan / Bitterputs*. *The Greedy Hippo* is a short computer animation produced by Prof Jaco Kruger, Dr Ina Le Roux, C.E. (Wessie) Van der Westhuizen and the *Tambani* community outreach initiative (Chapter two; Kruger & Van der Westhuizen, 2011:31 and Swanepoel & Van der Westhuizen, 2012: 90-99). Additionally, Jaco Burger and Richardt Strydom worked collaboratively to produce their artist's book *Ad Hominem* that would later receive the outstanding visual artist's award at the Stellenbosch *Woordfees* in 2010. Furthermore, Strijdom Van der Merwe and Jo-Marie Rabe produced the artist's book entitled *Verneukpan / Bitterputs*. More examples of this nature may be viewed on the project website <http://bookboek.co.za/> It should be noted that the quality and artistry evident in the artist books (tacit knowledge) produced for the exhibition would later facilitate the explicit knowledge creation process.

In terms of the collaborative models discussed in Chapter five, the TBP project could be considered a co-operative inquiry by a self-organising team that, in terms of the overarching collaborative practice, utilises complementary and integrative collaboration. Figure 12 provides a visualisation of this process.

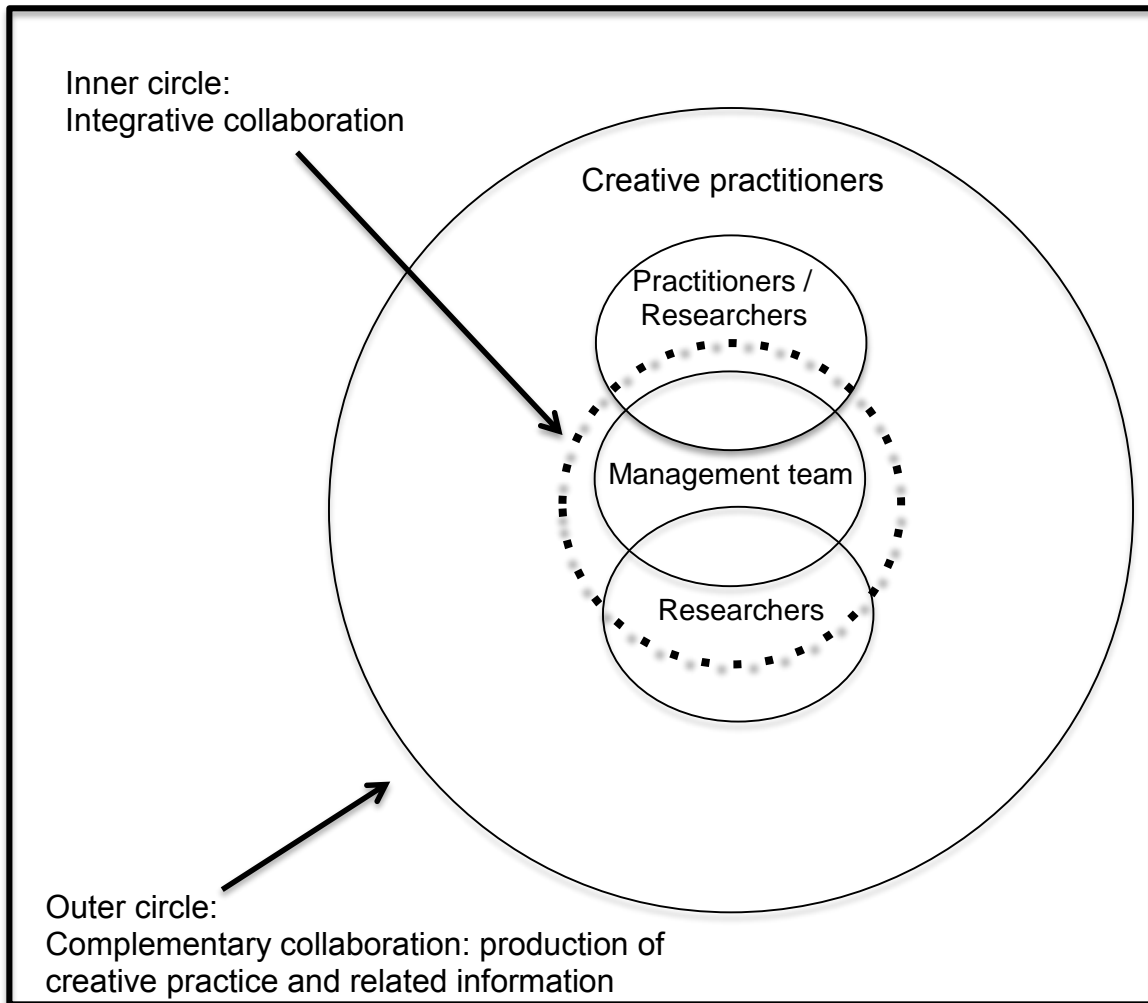


Figure 12: Collaborative interaction in the *Transgression and Boundaries of the Page* project

In the diagram above, the outer circle is viewed as complementary collaboration. In this collaborative mode, participants work towards a common goal while utilising their self-knowledge as artists. In this type of collaboration, the artistry (knowledge assets) often results in new modes of expression (John-Steiner, 2000:198). These new modes of expression are evident in the creative productions produced for the TBP project. In the outer circle, participants work individually or in collaboration, but were primarily concerned with the production of artefacts, creative production related workshops and the provision of artefact related information for the social media platforms, catalogues and exhibitions. Participants in this circle were mainly involved in phases two and three of the project.

The inner circle is viewed as integrative collaboration, characterised by a group of participants who engage in collaboration over a longer period. This process is

sustained by a shared vision and mobilised by on-going dialogue. The group is typically concerned with the transformation of existing knowledge into new artistic approaches and vision (John-Steiner, 2000:203).

In terms of this inner circle, the management team Greyling (Creative Writing), Marley (Graphic Design) and Combrink (History of Art) were involved in the majority of the aspects of the TBP project. While not officially part of the management team, Dr M.C. [Rita] Swanepoel (subject group History of Art, NWU, Potchefstroom Campus) made a significant contribution to the research phase of the project. Additionally, Van der Westhuizen from the subject group Graphic Design at the NWU, Potchefstroom Campus was instrumental to the graphic design, branding, and social media dimensions. As a result, the management team and faculty members at the NWU were involved in the majority of the activities and could be considered core project members. In short, the inner circle participants were involved in all the above-mentioned activities as well as contributing to dialogue, colloquia and workshops that resulted in accredited research outputs.

Consequently, socialisation is evident in phase two (knowledge creation) of the TBP project as the above-mentioned activities were specifically designed and executed in order to facilitate social interaction and tacit to tacit knowledge exchange. The notion of socialisation is related to and dependent on having a space that is conducive to knowledge creation. Therefore, the notion of space (*ba*) as related to the above-mentioned socialisation is the topic of the next section.

8.4.3 *Ba*: Initiating *ba*

The aim of the *ba*, in terms of socialisation, is to create an environment of care, trust and commitment, which is driven by intent. Because tacit knowledge is considered an important resource, an environment needs to be created in which existing knowledge (experiential knowledge assets and experiential knowledge) is utilised. At this level, this occurs by means of a process (socialisation) in an environment or space conducive to social interaction (initiating *ba*). Assets, process, and space interact and contribute to knowledge creation.

In terms of the organisational culture, an open, accommodating design is necessary to facilitate the knowledge conversion process. In this context, individuals realise that they possess knowledge assets, which in collaboration may be amplified and contribute to knowledge creation in pursuit of the knowledge vision (Nonaka & Konno, 1998:41, 45-46; Zarraga & Bonache, 2005:674).

In terms of the TBP project, certain actions pre-empted the creation of space for social interaction. The most notable of these were the planning and conceptualisation of the projects (and the related research objectives) as well as the selection of a self-organising team with the relevant knowledge assets. In this context, initiating *ba* was created with the purpose of removing barriers between the self and the group, thus creating an environment of care, trust, and security.

Although the management approach to the project was one that allowed for voluntary participation and the freedom to decide on the level of engagement, it is pointed out that initiating *ba* were managed as a series of interconnected meetings and workshops in which social interaction was initiated.

Examples of such events, such as the bookbinding and creative writing workshops, have been discussed in the previous section. However, the project launch held on the 4th of March 2009 at the NWU was probably the most significant event in this regard. This is because this was one of the only times in the project that the majority of participants physically shared the same space. During the launch, the approach and objectives of the project were communicated with all the participants (researchers and artists), creating a shared vision. Fundamental to this contextualisation was the notion of PLR as an exploratory journey with a multitude of possibilities. The aim was to make participants feel comfortable within the broader context of the project.

Creative practitioners were asked to engage with the theme of the project by means of artistic production, which would act as the catalyst for further knowledge production, such as written research; for example, articles. As mentioned in the previous section, time was allocated for social interaction in order to facilitate tacit to

tacit knowledge exchange. The type of knowledge that is utilised at this level and phase is experiential knowledge, addressed in the next section.

8.4.4 Participatory paradigm: Extended epistemology: Experiential knowledge

Experiential knowledge is the process of making sense of and understanding personal experiences. This knowledge creation process is influenced by the environment in which it is employed, the interaction with others and the time at which it is employed (cf. Chapter four). In the context of phase two and level two, experiential knowledge, which forms part of the extended epistemology of the participatory paradigm (cf. Chapter four and seven) is coupled with experiential knowledge assets, socialisation and initiating *ba*. The reason for this is that all of these knowledge conversion mechanisms prioritise tacit knowledge, which may be harnessed by means of social interaction.

According to Heron and Reason (1997:281), experiential knowledge is derived from experiential and perceptual interaction and enactment. During socialisation, experiential knowledge, which is often pre-linguistic and relies on a communally understood substrate of non-linguistic expressive signs (Heron, 1996:206), is activated. In situations that are designed to initiate knowledge exchange, such as the above-mentioned workshops; the proximal dimension, which is stored in memory, is expressed by means of language, gesture, action and images (Polanyi, 1958; 1962; 1966a; 1966b). Therefore, the individual's proximal knowledge is combined with the proximal knowledge of others to form a more complex and nuanced understanding of the issue being investigated. In terms of the TBP project, the theme served as the focal point of departure, which elicited a multitude of individual or group utilisations of proximal knowledge, which were manifested as creative productions. The knowledge creation process in the socialisation context is often difficult to predict and tends to be captured in retrospect. Consequently, the launch of the TBP project was recorded on video in order to capture a holistic picture of knowledge that could serve as possible research data.

As mentioned, the artists' books (tacit knowledge) are manifestations of experiential knowledge that serve as the catalysts of further knowledge creation. As is evident

from the project webpage and digital catalogue, this project delivered a rich variety of provocative and intriguing books of this type, which have contributed to, questioned and expanded the genre (Greyling *et al.*, 2012). This collection of books addressed many themes and demonstrated remarkable artistry and was thus a rich source of knowledge, which could be explored and elucidated. While it is impossible in this study to describe all the artists' books that were produced for the project, they may be viewed in the digital catalogue (Appendix 1) and on the project webpage <http://bookboek.co.za/>.

To conclude this section, it was determined that the knowledge creation phase of the TBP project provides evidence of the knowledge conversion mechanisms and the utilisation of experiential knowledge as proposed in the participatory paradigm. In terms of the knowledge generation phase of a project, the realisation that experiential knowledge assets may be managed and utilised by social interaction could be beneficial. In this context, the tacit to tacit knowledge exchange (which manifests in creative production and artefacts) may be facilitated and recorded in order to inform the tacit to explicit knowledge conversion, which occurs on level three and is the topic of the next section.

8.5 Analysis of phase three of the *Transgressions and Boundaries of the Page* project by means of level three of the knowledge conversion mechanisms (tacit to explicit knowledge conversion)

Phase three is the knowledge presentation and communication phase of the TBP project and is considered a level three aspect. This phase of the project entailed the exhibition of the creative outputs, creation of exhibition catalogues as well as related walkabouts and lectures. Essentially, this meant that the artefacts formed the starting points for activities such as walkabouts and discussions with and by artists and researchers writing articles that were to be published in *Literator* (2012:1[33]).

Conceptual knowledge assets, grounded in experiential knowledge, were used to explore and explicate the patterns of meaning inherent in the creative productions. The process of externalisation, or tacit to explicit knowledge conversion, occurred while artists were asked to give a written contextualisation (explanation of their work). This was exhibited with their artistic production and used to compile the printed and

digital catalogues. Walkabouts and discussion groups were also arranged to further explore knowledge creation possibilities (cf. Chapter two). This collective process of interrogating and re-conceptualising concepts by means of meaningful dialogue in order to facilitate shared context and understanding, could be considered a dialoguing *ba*. Therefore, the artefact, in the form of presentational knowledge, allowed for, and even stimulated, imaginative interpretations, which were then interrogated by means of dialogue. As is the case with the previous section, the knowledge conversion mechanisms are discussed below in relation to the management phases of the TBP project. In accord with the previous sections, Table 11 below presents an overview of level, and phase, three of the TBP project.

Table 11: Consolidated knowledge conversion mechanisms: level three

Level three: Knowledge conversion			
Phase three of the TBP project: knowledge presentation and communication (February 2010 - July 2010)			
Knowledge assets	SECI modes	<i>Ba</i>	Participatory paradigm: Extended epistemology
<p>Conceptual knowledge assets</p> <ul style="list-style-type: none"> • Grounded in experiential knowledge assets. • Conceptual knowledge expressed/articulated through images and symbols. • This knowledge asset is informed by theory but 	<p>Externalisation</p> <ul style="list-style-type: none"> • The conversion of tacit knowledge surfaced during socialisation to more explicit knowledge, such as words or images. As such, metaphor and images are often used to articulate the tacit, personal dimension in more understandable ideas. 	<p>Interacting / Dialoguing <i>ba</i></p> <ul style="list-style-type: none"> • A shared space in which a more conscious construction of knowledge occurs. • Tacit knowledge is made explicit by negotiating concepts, common terms and mental models. • Metaphors and images are used to create common 	<p>Presentational knowledge</p> <ul style="list-style-type: none"> • This type of knowledge is grounded in experiential knowledge. • Involves the cognisance of patterns of meaning derived from experiential knowledge. • Invites imaginative interpretations and investigations.

<p>may be presented as metaphor and aesthetic creation.</p> <ul style="list-style-type: none"> • Includes the notion of branding as a conceptual framework for participants. 	<ul style="list-style-type: none"> • Concepts are interrogated and reconceptualised by means of meaningful dialogue to facilitate shared context and understanding. 	<p>mental frames of reference.</p>	
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8.5.1 Knowledge assets: Conceptual knowledge assets

Conceptual knowledge assets are more definable and tangible than experiential knowledge assets as they may be presented and expressed as image, symbols, and/or text. In the knowledge management context, conceptual knowledge assets refer to the conceptual/theoretical knowledge held by members of the self-organising team (Nonaka *et al.*, 2000:21-22; Chou & He, 2002:150; cf. Chapter seven). The use of conceptual knowledge assets involves the identification and conceptualisation of meaning and patterns of meaning derived from experiential knowledge. As mentioned in Chapter five, in the practice-led research context, this exploration of meaning could take on imaginative and multiple readings (Sullivan 2006:19).

In terms of the conversion of tacit knowledge to explicit knowledge, this may be viewed as the beginning of the critical analysis and validation process, which is necessary within the PLR context. As discussed in Chapter five, PLR, in the context of this study, needs to be contextualised, which may occur in the form of a critical engagement with the chain of reasoning involved in the creation of the artefact. Alternately, it may be presented as a more theoretically informed exegesis (Biggs & Büchler, 2007:69). Concerning this, Niedderer *et al.* (2008:5) consider the authorial perspective to be important to the transformation of the intention from a claim of significance (uncontextualised) into a claim of meaning (contextualised). Consequently, the contextualisation of the artefact in the PLR context requires the utilisation of conceptual knowledge assets.

In terms of the TBP project, the artists and researchers involved in the project were selected for their conceptual, research and practical skills. It was expected that the combination of theorists and artists would initiate a co-operative inquiry resulting in fruitful interaction between research and practice (Brown & Sørensen, 2009:156; Marley, 2012:14).

In terms of explicating their creative production, artists were asked to provide an artist's statement concerning their work for the exhibition. Thereby, tacit knowledge was formalised and made transferable to a broader audience. This information was instrumental in informing the discussions that arose because of the walkabouts and

group discussions, which lead to the next to the next knowledge conversion mechanism, namely externalisation.

8.5.2 SECI modes: Externalisation

As clarified in Chapter seven, externalisation is the third step in the process of moving towards explicit knowledge. The purpose of externalisation is to create a process in which knowledge codification is started so that it may be shared and discussed with others. In other words, tacit knowledge is converted to less ambiguous and more comprehensible knowledge modalities, resulting in group knowledge (Marley, 2012:14). In this context, artists used reflection-in-action and reflection-on-action (cf. Chapter three) to contextualise their creative process and final artefact in the TBP project.

Additionally, the externalisation process may involve the utilisation of external knowledge such as that of the History of Art theorists (Nonaka & Takeuchi, 1995:238). These theorists were not themselves viewed as external in terms of the project, but, rather, were viewed as being external to the authorial perspective. However, in terms of collaborative synergy, their conceptual knowledge assets were instrumental to the identification of research possibilities and conceptual patterns during walkabouts and research discussions.

As discussed in Chapter two, several activities were designed and initiated to promote externalisation. These activities were:

- the creation of information (by the artist) that would accompany the artworks on exhibition;
- exhibition related walkabouts and discussions;
- the production of the print catalogue;
- the design and compilation of a digital catalogue.

In terms of the first activity, each artist was asked to give a written explanation of his or her artist's book. The purpose was to allow them to give contextual information that would facilitate a more informed reading thereof. The second activity was the walkabouts and discussions held in the various gallery spaces in which both the artefact and the written contextualisation were exhibited. These walkabouts were

held at all the exhibition venues with members of the public and various student groups. These open, informal discussions helped to identify and explore themes, concepts, and patterns of meaning. In association with the walkabouts, Greyling and Marley gave a presentation titled *Creative research projects: how is it possible?* in the J. S. Gericke Library auditorium at the campus of the University of Stellenbosch. In this presentation, the process of conducting multi-practitioner PLR projects was explicated. In this way, tacit knowledge was formalised using explicit means to communicate it effectively to the audience.

The third activity was the writing of informal articles for a printed catalogue of the exhibition. As mentioned, the idea of these informal essays was to allow participants to write about their work or the exhibition with the understanding that these articles could form the basis of more formal articles. The more theoretically inclined participants identified conceptual patterns evident in the exhibition or did theoretical readings of artworks. This approach was aligned with the tradition of research used in art history, which is affiliated with the critical theory paradigm (cf. Chapter four).

An example of this is an essay entitled *Loss, vulnerability and the need to tell* that was written by a staff member, Combrink (2011:15-17), in the History of Art subject group. In this contribution to the catalogue, she identified loss and vulnerability as an underlying theme in some of the works in the exhibition. Combrink states that:

In *Transgressions and Boundaries of the Page* a number of artists have hinted at the nature of loss, and of the consequences thereof, in various ways: nostalgically, compassionately, environmentally, ephemerally and playfully. The richness of the theme becomes even greater so when the works are viewed in dialogue as various aspects of the theme are highlighted in divergent approaches. The need to share experiences of vulnerability and loss in a public display by means of creative engagement co-opts audiences as confessors; the sharing of experiences gives voice to silences and saves the issue from extinction (Combrink, 2011:17).

As is evident from the above quote, Combrink has distilled and extracted collective issues that may be identified in the presentation of the artefacts. On the other hand, the essay by Greyling (2011:48-50) titled *Tinboektoe - The story of a story*; is an example of creative practitioners who reflect on their creative processes. As Greyling comments:

This is the story of Tinboektoe toe (To Timbuktu with a pun on “tin”). It is the story of the origin of an idea; of the gradual development of this idea over the course of 18 months; of technical hiccups, of play and discovery; of a book that tells many stories – and of so many who played along, co-created, and journeyed with her (Greyling 2011:48).

Greyling's contribution may be viewed as indicative of PLR since she utilises reflective practice to describe the chain of events and the creative development of her artist's book. As stated in Chapter two, twelve of the sixteen articles written for the catalogue were written from the creative practitioner's (PLR) perspective.

The fourth activity was the design and compilation of the digital catalogue (Appendix 1). The aim of this catalogue was to give an overview of the project; therefore it was divided into the following subsections:

- *About the project*: which gave an overview of the concept and content.
- *Artists*: This section provided biographical information about the artists and showcased their creative productions.
- *Exhibitions*: showcased the exhibitions in the various venues.
- *Workshops*: portrayed the collaborative interaction that took place during the project workshops.
- *Behind the scenes*: This section presented an overview of various activities such as the mounting of exhibitions.

The decision-making that occurred during the creation of this digital catalogue involved the documentation of artworks, compilation of textual information, categorisation of information and images, and the design and implementation of the digital interface. Consequently, this is considered externalisation because the various facets of the project were compiled in an accessible format.

All of the above-mentioned writing, design and compilation activities were viewed as externalisation, which, in some cases, contributed to more formal research during the final stage of the project. An important aspect was the creation of space in which camaraderie and solidarity contributed to the execution of the task. This notion of space is the topic of the next section.

8.5.3 *Ba*: Interacting / Dialoguing *ba*

As mentioned in Chapter seven, a dialoguing *ba* (a level three aspect) refers to a space that is consciously constructed to initiate dialogue. In this context, tacit knowledge is discussed, negotiated, explored and converted into more explicit knowledge formats (Nonaka *et al.*, 2000:17). The knowledge that is presented is, therefore, analysed and reflected upon by means of critical dialogue.

In the organisational context, the aim is to create a collective team understanding. Although this dialoguing process is viewed as essential, it is contended that, in multi-practitioner PLR projects, the aim is to explore multiple possible understandings. As a result, the group is presented with a complex bouquet of possible interpretations that aims to form a holistic picture of the theme. In multi-practitioner PLR projects, the creative practitioner engages in reflection-in-action and reflection-on-action as well as interactive dialogue with others.

In terms of the TBP project, the aim was to explore the theme of the artist's book by means of PLR and, by implication, move from tacit to explicit knowledge. The project managers were responsible for facilitating walkabouts, research meetings and discussion groups, which could be considered dialoguing *ba*. As mentioned in Chapter two, the two meetings held on the 26th and 30th of April 2010 between the History of Art, Graphic Design and Creative Writing subject groups were designed to initiate discussion. A collection of research possibilities and themes was presented as a starting point to this discussion. These meetings were held in the NWU Gallery of the Potchefstroom campus to enable participants to engage with and refer to the exhibited artefacts. Participants (artists writing on their own work as well as researchers writing on the artists' works) were also introduced to all the theoretical resources and documentation of artworks that were available. In other words, the purpose of this process was to encourage participants to discuss, engage with, and explore research possibilities while the physical books were at their disposal. These group discussions involved individuals from diverse disciplines who contributed to interactive and collaborative learning (Marley & Greyling, 2010:175-176; Nonaka *et al.*, 2008:37-38). These discussions also initiated the process of producing articles for the print catalogue and the issue of *Literator* (2012:1[33]) produced during phase /

level four. The knowledge dimension indicative of this third level and phase is presentational knowledge, which is discussed below.

8.5.4 Participatory paradigm: Extended epistemology: Presentational knowledge

Presentational knowledge emerges when patterns of meaning are derived from experiential knowledge (Heron 1996:33-34/53; cf. Chapter four). In the PLR context, the artefact may be viewed as a culmination and result of practical and experiential knowledge that manifests as presentational knowledge. This correlates with the notion that presentational knowledge furnishes experiential knowledge as metaphors and aesthetic creations by means of graphic, plastic, musical, vocal and verbal art forms or textual forms (Heron and Reason, 1997:281). Both experiential knowledge and presentational knowledge are inextricably intertwined and it is often difficult to distinguish between the two. However, on this level of the TOKC, knowledge is converted from the tacit to the explicit dimension and, therefore, must take on more explicit, understandable formats. With regard to the management of multi-practitioner arts-related PLR projects, it is important that this initial writing process be an exploratory, imaginative and interpretive process that opens up research opportunities. This divergent thinking process, which converts tacit knowledge to explicit knowledge, lays the foundation for the explicit to explicit knowledge conversion that level, and phase, four facilitate.

To summarise, on level three of the TOKC and in phase three of the management of the TBP project, conceptual knowledge assets, externalisation, dialoguing *ba* and presentational knowledge are evident. In this context, the knowledge that surfaced during the various social activities aimed at promoting dialogue (walkabouts and meetings) utilised the group's conceptual knowledge assets and is considered dialoguing *ba*. Furthermore, the tacit knowledge dimensions of the artefacts were explored and explicated in terms that are more explicit. This was an exploratory process conducted in an atmosphere that facilitated camaraderie and solidarity, and aimed to identify research possibilities.

Therefore, this knowledge presentation and communication phase of the TBP project was primarily concerned with the exhibition, related discussions and research

activities. This brings one to the post-exhibition phase of the project. The formalisation and dissemination of knowledge is the focus of the final phase of the TBP project.

8.6 Analysis of phase four of the *Transgressions and Boundaries of the Page* project by means of level four of the knowledge conversion mechanisms (explicit to explicit knowledge conversion)

As mentioned, the fourth phase of the TBP project and the fourth level of the knowledge management cycle concentrate on the formalisation and dissemination of knowledge. This phase and level required the utilisation of systemic knowledge assets. Combination (SECI mode), systemic *ba* and propositional knowledge.

In terms of the TBP project, this phase was primarily concerned with the reading and contextualisation of artefacts in the form of academic articles, making use of conceptual and systemic knowledge assets to reconfigure and recombine explicit knowledge. Accordingly, combination and the related explicit to explicit knowledge conversion are undertaken. Propositional knowledge, conceptualised as language-based statements that utilise theoretical constructs, is the dominant knowledge mode in this phase. As a result, the academic, peer reviewed processes facilitate the rationalisation and verification of knowledge and could be considered systemic *ba*.

Consequently, the explicit knowledge, which was derived from tacit knowledge during the third phase, is now formalised in more explicit terms. During the TBP project, this explicit to explicit knowledge conversion was achieved through research related workshops, research meetings and colloquia. Table 12 provides a visualisation of the correlating aspects of phase four and level four.

Table 12: Consolidated knowledge conversion mechanisms: level four

Level four: Knowledge conversion			
Phase four of the TBP project: formalisation and dissemination of knowledge (July 2010 – December 2011).			
Knowledge assets	SECI modes	<i>Ba</i>	Participatory paradigm: Extended epistemology
<p>Systemic knowledge assets</p> <ul style="list-style-type: none"> • Grounded in experiential and conceptual knowledge assets. • Codified systematic, explicit knowledge and language-based statements. • Unambiguous communication. 	<p>Combination</p> <ul style="list-style-type: none"> • Explicit to explicit knowledge exchange and conversion. This is a further development of the externalisation process. • Converting explicit knowledge into new, more interrogated explicit knowledge. 	<p>Systemic <i>ba</i></p> <ul style="list-style-type: none"> • Space in which the conversion of explicit knowledge may be converted into more explicit knowledge. • In this context, space may refer to databases that make knowledge available. • Systems for the 	<p>Propositional knowledge</p> <ul style="list-style-type: none"> • Language-based (written) statements that use theoretical constructs.

	<ul style="list-style-type: none">• Knowledge is reconfigured and recombined.• This process relies on conceptual and systemic knowledge assets.	rationalisation and justification of knowledge, such as peer review processes, are also regarded as systemic <i>ba</i> .	
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8.6.1 Knowledge assets: Systemic knowledge assets

Systemic knowledge assets are derived from conceptual knowledge assets and are presented in textual formats. This type of knowledge, which could take on the form of reports and articles, is easy to understand and may easily be communicated without ambiguity, to a wider audience. In terms of knowledge management, this is the most tangible knowledge asset and the communication and dissemination thereof is determined by the institutional knowledge vision (cf. Chapter seven). Systemic knowledge assets correlate with the conceptualisation of propositional knowledge associated with the participatory paradigm discussed in Chapter four. This type of knowledge is the accepted norm in the academic context.

However, in the context of this study and with regards to PLR, the communication of systemic knowledge assets is conceptualised as the combination of explicit and tacit knowledge. What is meant here is that the artefact may be discussed in explicit terms, but needs to be contextualised by some form of audio-visual representation, such as photographs, videos, sound or other appropriate media. In terms of this broader conceptualisation of systemic knowledge assets, a digital exhibition catalogue containing images, video and sound recordings was made available to all participants. Additionally, in order to make the salient link between the articles written for the project *Literator* (2012:1[33]) and the artefacts under discussion, hyperlinks to the project website were inserted into each article. While it is conceded that this is not the ideal way to experience these artist's books, it was an attempt to include the often-neglected tacit dimension in the academic journal (Greyling *et al.*, 2012:3). By following these links, the reader of the article could easily access additional images of the work under discussion, artists' statements, biographical information and information on the project as a whole. Additionally, in the spirit of including the tacit knowledge dimension, some creative writing produced for the project was included in the *Litera* section of this *Literator* (2012:1[33]).

As is evident in the paragraph above, when managing multi-practitioner arts-related PLRS projects, the holistic knowledge context needs to be communicated and the

systemic knowledge assets must include some form of audio or visual representation. The above-mentioned activities, which facilitated the explicit to explicit knowledge conversion, fall within the SECI mode of combination.

8.6.2 SECI modes: Combination

As discussed in Chapter seven, combination is the process of reconfiguring existing explicit knowledge into more complex and considered explicit knowledge in order to gain new insight. Activities such as workshops, colloquia, and dialogue sessions aid this process (Nonaka, 1994:18). This final stage of the knowledge conversion process thus builds on the explicit knowledge created during the externalisation conducted on level three and in phase three. The three important procedures involved in combination are i) the capture and integration of information, ii) dissemination and iii) editing and processing (Nonaka & Konno, 1998:44).

The collection of data involves the capturing and integration of knowledge, which is then integrated into communicable formats and made available to the organisation. As mentioned, in the PLR context, this would also involve the documentation of the artefact and related creative processes. Dissemination involves any means by which knowledge is communicated or made available to members of the self-organising team. This could take on the form of information sessions, presentations, or the availability of databases. Editing and processing entails the justification of knowledge in terms of the institutional knowledge vision (Nonaka & Konno, 1998:44). These three procedures do not necessarily occur sequentially. In actuality, they often overlap and run parallel to each other. Knowledge conversion through combination is most effective when the self-organising team has unrestricted access to the existing stock of knowledge.

In Chapter two, the important research activities conducted during the fourth management phase of the TBP project are mentioned: research discussions, research colloquiums and a research writing workshop. The initial exploratory discussions, which were held in the NWU Gallery on the Potchefstroom Campus during the third phase of the project, were continued in the seminar room in the Arts building on the

Potchefstroom Campus of the NWU during this phase of the project. These meetings were held once every three weeks (during 2011); their purpose was to refine and clarify the ideas and research derived from the previous three phases. These discussions served as a sounding board for the conceptualisation and finalisation of articles for the proposed *Literator* (2012:1[33]). The meetings were used to convey and show important information, such as the digital catalogue created (18th February 2011) for the project in the third phase. Additionally, members of the project were informed of the database created for the project, which contained relevant articles and web links (cf. Chapter two). In other words, the digital catalogue and databases were disseminated to participants for use in their research process. On the 11th of March 2011, preliminary abstracts for articles, which had been disseminated via e-mail two weeks prior to the meeting, were discussed. This discussion was, therefore, an additional step in the refining and editing process.

Within this context, members of the emergent research niche helped one another other and, in some cases, collaborative writing partnerships were established. An example of this was the partnership between Dr M.C. [Rita] Swanepoel (History of Art) and [Wessie] Van der Westhuizen (Graphic Design) which resulted in the article, titled *The Tambani project: a computer animation of The Greedy Hippo* (Swanepoel & Van der Westhuizen, 2012:90-99). An additional aspect that arose through this collaborative process was the facilitation of skills transfer and knowledge sharing. With reference to the inclusion of the tacit dimension, the web link provided in this article allowed the reader to view the animation under discussion in its entirety.

As mentioned in Chapter two, Dr M.C. [Rita] Swanepoel (emergent research niche leader) organised a research colloquium on the 6th of April 2011 that was attended by the members of the emergent research niche. The purpose of this was to engage upper management in a bi-directional discussion as to what the emergent niche could contribute to the NWU context. During this colloquium, the academic Vice-Rector, Research and Planning of the Potchefstroom Campus, Prof Amanda Lourens, and the Dean of the Faculty of Arts, also at the Potchefstroom Campus, Prof Jan Swanepoel,

made presentations on the institutional and faculty research contexts, respectively. This was followed by a presentation by Marley on the past and current research activities within the emergent research niche and included a report on the progress to date, as well as an overview of the strategies and methodologies employed in the emergent research niche as a whole. In this presentation, the execution of multi-practitioner arts-related PLR projects, the importance of utilising the tacit knowledge dimension related to and embedded in the creative process and the final creative product, was highlighted. Although this colloquium was not officially a TBP activity, it was instrumental in contextualising and validating our research focus for postgraduate students, staff and top management. It underlined the fact that the emergent research niche had a specific strategic plan and was not an unstructured, haphazard process. This was important because, as discussed in Chapter five, PLR is considered a recent research domain and is still in the process of negotiating its position within the university context, which, for the most part, is focused purely on textual outputs. This colloquium helped to establish a position within the NWU research context. It should be noted that the artistic and research activities of this group resulted in the awarding of research niche status (cf. Chapter two).

A further TBP project initiative designed to stimulate the on-going explicit to explicit knowledge conversion was a research writing workshop held on the 13th of June 2011. Dr M.C. [Rita] Swanepoel organised and co-presented this workshop with Prof H.F. [Herrie] Van Rooy, an NRF-rated researcher at the Faculty of Theology at the NWU, Potchefstroom Campus. The aim was to help participants structure and refine the articles that they were working on. After the workshop, participants sent their articles to Van Rooy who gave individual feedback sessions. Additionally, participants distributed their articles to other, more experienced members within the History of Art, Graphic Design and Creative Writing subject groups who commented on their work. In some cases, additional sources were recommended which further facilitated the combination process.

The common goal in this scenario was the preparation of articles for the dedicated edition of *Literator* (2012:1[33]). The willingness by members of the group to extend help and advice established an environment of trust and security. This workshop and subsequent feedback contributed to the editing and dissemination process.

Another step in the critical engagement with the combination of explicit knowledge was the TBP project research colloquium held on the 13th and 14th of July 2011. This was the first PLR colloquium linked to a multi-practitioner arts-related project held at the NWU. This gave the participants the opportunity to present their research or to discuss their creative work produced for the project. The colloquium was positioned as an event during which participants were asked to give constructive criticism and help each other in the development of their research or creative practice. The majority of presentations dealt with some aspect of the PLR linked to the TBP project. Participants from other institutions, such as Brendan Grey and Gordon Froud from the University of Johannesburg and Leti Kleyn from the University of Pretoria, presented papers and facilitated inter-institutional deliberation.

The colloquium was documented by means of video in an attempt to capture the entire process. Additionally, the print catalogue that contains informal articles and an interactive DVD produced during level and phase three of the project, was launched at this event. Therefore, this event was a further opportunity to present, discuss, and refine research findings. As such, it contributed to the explicit to explicit knowledge combination aim of this phase and level of the TBP project.

As mentioned in Chapter five, collaborative PLR projects of this nature have the potential to deliver a multitude of research outputs from divergent perspectives, providing a holistic picture of the theme being investigated (Smith & Dean, 2009:20). The TBP project may be viewed as indicative of this process. In this regard, seven of the twelve articles produced for the project could be characterised as critical theory readings of selected artist's books, while four addressed aspects of PLR.

In terms of critical theory readings, Dr M.C. [Rita] Swanepoel and Moya Goosen, in the article *Vervreemding in Leora Farber se The futility of writing 24-page letters (Alienation in Leora Farber's The futility of writing 24-page letters)* (2012), read the above-mentioned artist's book according to a feminist, post-colonial theoretical framework. In *'n Murgtere saak: 'n gendermatige lees van Boom van die lewe en Ad Hominem* (2012) (*Tender like Marrow: A gender-based reading of tree of life*) and *Ad hominem*) (2012), Louise marié Combrink employs the notion of masculine vulnerability and the transgression of conventional gender binaries to explicate the work of Paul Schutte (*Boom van my lewe – [Tree of my life]*) as well as that of Richardt Strijdom and Jaco Burger (*Ad hominem*). Dineke Van der Walt identifies aspects of the grotesque and the similarity of narrative message in her comparative reading, entitled *Die hebsugtige seekoei en Rooikappie: Die groteske in sprokies (The Greedy Hippo and Red Riding Hood: The grotesques in fairy tales)* (2012). In a similar vein, Prof John Botha uses Jungian archetypes to explore the imaginative, fantasy images evident in *The Greedy Hippo* in his article *Comparing imagery in The Greedy Hippo and Crouching Tiger, Hidden Dragon* (2012). This article presents a look at the esoteric, symbolic and fantasy use of images in these non-Western representations. *Seemingly 'impossible' art forms: Strijdom Van der Merwe's land art in the context of the South African art market* (2012) by Jean le Clus-Theron explores the problematic nature of the artist's land art and the commodification thereof in the contemporary art market.

Furthermore, Dr M.C. [Rita] Swanepoel's (2012) article, *Oor die einders van die bladsy as konseptuele kuns (Transgressions and Boundaries of the Page as Conceptual Art)* gives an overview of the TBP project and argues that the exhibition in its entirety may be viewed as a language-based conceptual art installation. In his article, *Towards a theoretical underpinning of the book arts: Applying Bakhtin's dialogism and heteroglossia to selected examples of the artist's book* (2012), David Paton responds to Johanna Drucker's challenge to provide stronger theoretical foundations in terms of the intellectual engagement with the artist's book. Consequently, Paton uses Bakhtin's notions of dialogism and heteroglossia to develop a theory, which positions the artist's book as a liminal and polyvocal phenomenon. As he states

These critical terms, which demonstrate the dialogic, multivocal and heteroglot voices between works in history and within themselves, as cultural utterances, were shown to be appropriate and useful frames for the analysis of particular qualities which enunciate the presence of artists' books in the world: self-consciousness, discursive perceptivity and reflexivity (Paton, 2012: 24).

In terms of elucidating the PLR aspects of the TBP project, Marley explores the notion of knowledge generation in this multi-practitioner arts-related PLR project. He argues that knowledge is a subjective and socially constructed phenomenon, both tacit and explicit in nature. Therefore, the TOKC by Nonaka *et al.* (1994) is proposed as an appropriate knowledge management model. This article, entitled, *An investigation of the appropriateness of the Theory of Organisational Knowledge Creation as management model for practice-led research* (Marley, 2012), was also the first articulation of this idea and led to the current study.

In their article, *The diary of Bertha Marks as a heterotopia, as articulated in the artwork, The Futility of Writing 24-Page Letters* (2012), Leora Farber and Elfriede Dreyer clarify issues regarding the creation of the above-mentioned artist's book by Farber. They discuss the conception, historical context and theoretical underpinnings of this installation based artist's book. In her article, *Kreatiewe remediasie van Pynstiller deur Fanie Viljoen: Van kortverhaal na grafiese verhaal (Creative remediation of Pynstiller by Fanie Viljoen: From short story to graphic novel)* (2012), Greyling, in conversation with Viljoen, utilises intermediality, narratology and picture book and comic theory to explore the creation of the above-mentioned graphic novel/artist's book.

Leti Kleyn, in *We are aware – Creative writing, concrete poetry and writers' resistance* (2012), discusses the artist's book *sanity on the line*. This book is a compendium of concrete poetry produced by Kleyn's students in a Creative Writing course at the University of Pretoria. Kleyn explores the potential of concrete poetry as a creative writing strategy and situates the work produced by her students within this genre.

The Tambani project: A computer animation of The Greedy Hippo (2012) by Van der Westhuizen and Dr M.C. [Rita] Swanepoel is another article that explores collaborative

interaction. This article details the production of this computer animation from start to finish and reflects on the process of transforming the embroidered images of the *Ngano Venda* folktale into the final digital format.

The deadline for the submission of articles was 25 August 2011. After submission to the dedicated issue of *Literator*, the articles underwent the normal double blind peer review process. As part of the peer review process, the articles were referred back to the authors for final editing and corrections. In total, twelve articles were submitted for publication. Nine of these articles were written by members of the History of Art, Graphic Design, and Creative Writing subject groups at the NWU who had actively participated in the above-mentioned meetings, colloquia and workshops. Additionally, Greyling, Marley, and Combrink served as guest editors for this edition of the *Literator* under the guidance of Prof Hein Viljoen, the editor in chief. Consequently, these activities, which fall within the notion of combination, actively promoted explicit to explicit knowledge conversion and the creation of peer-reviewed articles (Marley, 2012:14).

As is evident from the above discussion, the TBP project produced research that employed a variety of methodologies and explored the theme from different perspectives. The activities conducted during this level and management phase were contingent on the notion of a conducive space for knowledge creation, which leads one to the systemic *ba* connected to this phase and level of the project.

8.6.3 Systemic *ba*

According to (Nonaka *et al.*, 2000:17), in the context of the TOKC, a systemic *ba* is indicative of a virtual rather than real space. Explicit knowledge is made available and may be combined into more complex explicit formats. Knowledge may thus be re-contextualised or re-organised and reinterpreted (Nonaka & Konno, 1998:47). In terms of the TBP project, the webpage and digital catalogue created for the project (bookboek.co.za) as well as the digital database were virtual spaces for the storage and retrieval of information.

Additionally, the peer review systems administered by the *Literator* editing committee are considered systemic *ba*. However, due to the collaborative nature of multi-practitioner PLR projects, these systemic *ba* are viewed as a support structure for formal social integration, such as the activities discussed above. The systemic *ba*, in the context of PLR, is thus viewed as a space for interactive dialogue that corresponds with, and is supported by, a digital space. It is thus a more formal version of level three's dialoguing *ba* that focuses on the articulation and verification of explicit knowledge. In other words, while I am in accord with Nonaka's notion of the systemic *ba* in the multi-practitioner arts-related PLR projects, this concept needs to be extended to include an interactive dialoguing dimension in which knowledge and skills transfer are able to take place.

8.6.4 Participatory paradigm: Extended epistemology: Propositional knowledge

As elucidated in Chapter four, propositional knowledge refers to language-based statements resulting from the theoretical exploration of a particular subject. This knowledge modality, derived from experiential and presentational knowledge, is communicated and disseminated in textual formats (Heron, 1996:109). This correlates with the notion of explicit knowledge, which shares the same characteristics. As is obvious from the discussion above, the focus of this level and phase of the TBP project was the creation of explicit knowledge in the form of accredited research articles.

The purpose of this section is to determine whether there is a correlation between the level four knowledge conversion mechanisms discussed in Chapter seven and the fourth management phase of the TBP project discussed in Chapter two. In both the level and the phase, the focus is placed on the creation of explicit knowledge in the form of textual research outputs. The activities conducted during this phase of the project were therefore designed to facilitate explicit to explicit knowledge conversion (combination). In this context, systemic knowledge assets and systemic *ba* were used to create explicit/propositional knowledge.

8.7 Conclusions

The aim of this chapter was to investigate the potential of the TOKC to serve as an appropriate management approach for multi-practitioner arts-related PLR projects in the academic context. Consequently, correlating aspects of the TBP project and TOKC were identified. In this discussion, the four knowledge conversion levels of the TOKC and the knowledge modalities of the participatory paradigm were compared with the four management phases used to execute the TBP project.

Distinct correlations between the four knowledge conversion levels and the four management phases of the TBP project were identified. Therefore, it could be concluded that the TOKC, coupled with an awareness of the participatory paradigm's extended epistemology, would be beneficial to the management of multi-practitioner arts-related PLR projects. The fundamental assumption that the TOKC and multi-practitioner arts-related PLR projects share the same paradigmatic foundation and conceptualisation of knowledge affirms that this management model is appropriate.

However, some salient aspects should be taken into account. In terms of multi-practitioner arts-related PLR projects: the utilisation of knowledge assets does not seem to be as level specific as Nonaka *et al.* have suggested. While Nonaka acknowledges that knowledge assets are grounded in and related to each other, I argue that they should be considered fluid entities that transgress levels, phases and even projects. An example of this is on level four, where systemic assets are considered to be of primary importance. However, I contend that conceptual knowledge assets are of equal importance on this level as the aim is to produce propositional knowledge.

Additionally, in multi-practitioner arts-related PLR projects, the notion of social interaction and critical reflective dialogue is considered an activity that should be extended beyond level three. In this context, the systemic *ba* created is not only a virtual space, but should include activities such as meetings, colloquia, and workshops that are specifically aimed at the formalisation of explicit knowledge. While it is acknowledged that the combination of knowledge in the writing of an article is often an individual

activity, these critical, reflective dialogue sessions assist in formulating ideas and often keep the researcher motivated and focused on the task. This conclusion is drawn from the fact that the meetings, colloquia, and workshops were fundamental to the formalisation of research in the TBP project.

One of the most significant realisations and adaptations to the TOKC, when managing multi-practitioner arts-related PLR projects, is concerned with the holistic communication of knowledge. In other words, the explicit to explicit knowledge conversion conceptualised on level four needs to be adapted to accommodate both the tacit and explicit knowledge modalities. If this is not done, the double articulation of practice and theory, which is the cornerstone of PLR, is negated and explicit knowledge will be prioritised. In the case of such a negation, the text would be expected to replace the experiential / tacit dimension, which will be counter-productive to the establishment of PLR as a valid research activity.

A future consideration in this regard is the creation of accredited journals that accommodate alternative modes of writing by including multimodal media, which are better suited to the effective communication of PLR.

CHAPTER NINE: CONCLUSION

9.1 Introduction

The purpose of this final chapter is to draw conclusions and ascertain whether the initial research questions have been addressed. Therefore, a brief review of each chapter is presented, after which a final discussion of the specific research questions is undertaken.

This research focuses on the practice of conducting multi-practitioner arts-related practice-led research (PLR) projects involving the History of Art, Graphic Design, and Creative Writing disciplines in the Faculty of Arts at the Potchefstroom Campus of the NWU. These projects, which, thus far, have been managed intuitively, have delivered significant creative and accredited research outputs over the past seven years (cf. Chapter two). However, in this study, I contend that a management model that offers a more theorised conceptualisation of knowledge creation that is appropriate to PLR, and the identification of a suitable research paradigm, will benefit future projects of this nature.

In support of this sentiment, the argument that the theory of organisational knowledge creation (TOKC) is an appropriate and effective management model for multi-practitioner arts-related PLR projects was presented in Chapter one. This assertion is based on the fact that both the TOKC and the multi-practitioner arts-related PLR projects conducted at the NWU involve knowledge conversion that moves from the tacit to the explicit knowledge dimensions through social interaction. Additionally, it is claimed that both the TOKC and PLR share the same paradigmatic foundation and holistic or non-reductionist conceptualisation of knowledge, which recognises the equal value of both tacit and explicit knowledge.

To further substantiate this argument, two of the multi-practitioner arts-related PLR projects conducted in the three above-mentioned subject groups at the NWU, Potchefstroom Campus were discussed in Chapter two. Therefore, the purpose of

Chapter two was to give a narrative description of the projects' management in order to inform further discussions. The *Tracking Creative Creatures* (TCC) (2007-2009) project was presented as contextual background after which a more detailed account of the *Transgressions and Boundaries of the Page* (TBP) (2009-2011) project was given. These projects were discussed according to the following four management phases. Phase one: conceptualisation, planning, and preparation; Phase two: knowledge creation; Phase three: knowledge presentation and communication. Phase four; formalisation and dissemination of knowledge.

The notion of tacit knowledge and reflective practice is the topic of Chapter three (Polanyi, 1958; 1962; 1966a; 1966b; Schön, 1983; 1987). This is important as these two concepts are considered fundamental building blocks for research in the creative disciplines (PLR) and the TOKC. Tacit knowledge is derived from personal experience, prior learning, skill, and intuition and is explored and understood through reflective practice. Therefore, tacit knowledge that is integrated with theoretical constructs is identified as a valuable knowledge source for PLR and the TOKC.

However, within the academic research context, the notion of tacit knowledge needed to be positioned within an appropriate research paradigm. In other words, there was a need to identify a research paradigm with suitable ontological, epistemological, and methodological dimensions that would accommodate tacit knowledge, reflective practice and, by implication, artistic practice. Consequently, in Chapter four, research paradigms were discussed. As such, the participatory paradigm with its subjective-objective ontology and extended epistemology is considered the most suitable paradigm in this regard. Central to the adoption of this paradigm is its holistic or non-reductionist conceptualisation of knowledge and its extended epistemology, which consists of practical, experiential, presentational, and propositional knowledge. Therefore, this extended epistemology accommodates the tacit and explicit knowledge dimensions (Polanyi, 1958; 1962; 1966a; 1966b). Additionally, Schön's (1983,1987) notion of reflective practice and the socially constructed nature of knowledge, which is often the

result of shared, co-operative, inter-subjective experience and activities, is also central to this paradigm.

In Chapter five, a historical contextualisation of PLR and the positioning thereof within the academic milieu was clarified. In the context of this study, creative practice and the associated process are viewed as central to PLR. However, in order to contribute to knowledge, it is necessary to contextualise practice in explicit terms. In other words, it is the combination of tacit knowledge (artefact) and the contextualisation thereof (explicit knowledge) that is able to communicate a holistic picture of knowledge. As such, PLR can function within the participatory paradigm and utilise the extended epistemology to substantiate knowledge. As discussed in this chapter, collaborative multi-practitioner arts-related PLR projects of this nature also have the potential to enrich standard practices of reading and interpreting artworks. If space is allowed, this could result in interesting collaborative research that bridge the gap between practice and theory.

The TOKC was discussed in Chapter six and seven. In Chapter six, the conceptual and historical evolution of the theory was discussed. Additionally, the knowledge conversion mechanisms, SECI modes, knowledge assets and *ba* were introduced. Correlations were then drawn between the TOKC and the participatory paradigm. It was concluded that the TOKC and PLR share the same paradigmatic foundation and are thus compatible concepts. In Chapter seven, a detailed description of the knowledge conversion mechanisms of the TOKC was presented. Furthermore, the knowledge conversion mechanisms and the knowledge modalities of the participatory paradigm are grouped according to four levels.

These levels are used as conceptual tools to analyse the TBP project in Chapter eight. In other words, the four management phases of the TBP project described in Chapter two were analysed according to the TOKC knowledge conversion mechanisms and the extended epistemology of the participatory paradigm. It was concluded that definite correlations between the four knowledge conversion levels and the four management phases of the TBP project exist and that the TOKC, in combination with the extended

epistemology of the participatory paradigm, would facilitate more effective management of multi-practitioner arts-related PLR projects.

As mentioned, the next section of this chapter will address the specific research questions posed in Chapter one in order to substantiate the above claims.

9.1.1. To what extent does the conceptualisation of tacit knowledge, reflective practice and the participatory paradigm underpin practice-led research and the theory of organisational knowledge creation?

As stated earlier, the notion of tacit knowledge and reflective practice are fundamental concepts to PLR and the TOKC. The reason for this is that they offer an alternative to the conceptualisation of knowledge as that which is embedded in objective scientific theory. Polanyi (1966a:1) contends, and I agree, that depersonalised objective knowledge (stemming from positivism) is problematic in the arts and humanities context as knowledge, in this context, is inherently subjective and often eludes communication that relies purely on explicit formats (cf. Biggs, 2002a; Niedderer, 2008). Additionally, PLR is contingent on the process of exploration and the creation of artefacts, which is a personal discovery not predetermined by theory. Therefore, knowledge stemming from the reading and interpretation of an artwork from an outsider perspective by means of a predetermined theoretical framework, as advocated by the critical theory tradition is also problematic (Guba, 1990:23 cf. Chapter four). Consequently, PLR and the TOKC are at odds with the positivist and critical theory notions of knowledge and require an epistemology of practice based in personal experience, which is what tacit knowledge and reflective practice offer.

Tacit knowledge is derived from personal experience, which is informed by theoretical constructs. Knowledge is, therefore, a combination of personal experience, intuition, and prior learning, which are intertwined with and interrelated to explicit theories. Polanyi (1966b:4) contends, “We know more than we can tell”. In other words, there is an additional dimension of knowledge, which eludes explicit language based communication. This dimension can, however, be expressed through other knowledge communication modalities, such as images, dance, music or a combination of these and explicit knowledge.

The idea of communicating knowledge in both tacit and explicit terms is what makes tacit knowledge relevant to the PLR context as the artefact is viewed as an integral conveyer of meaning. An additional aspect of tacit knowledge that is relevant to PLR is that it challenges the mind-body duality and emphasises bodily (artistic) skills as a relevant way of communicating knowledge. In congruence with PLR, the development of the TOKC is predicated on a “humanistic” notion of knowledge, which incorporates experience, emotion, intuition, and skills level (Nonaka *et al.*, 2008:7). Additionally, the TOKC draws on the Japanese intellectual tradition, which embraces the oneness of humanity and nature and rejects the mind-body duality (cf. Stenmark, 2000:3).

According to Polanyi (1966b:16-17), indwelling, which is the process of becoming immersed in a subject, promotes the effective utilisation of the proximal dimension. Contingent on the notion of tacit knowledge, Schön (1983; 1987) developed the notion of reflective practice with the underlying concepts of reflection-in-action and reflection-on-action. The most pertinent aspect of reflective practice is that it clarifies the process of foregrounding and communicating the proximal, tacit dimensions. In the reflective practice context, the creation of the artefact is regarded a reflective “conversation with the materials of a situation” (Schön, 1983:78). In this situation, the practitioner evaluates the consequences of the action taken in a reiterative cycle of discovery. The practitioner should be open to feedback from the situation and should move from the current state or situation to a desired state. This mode of inquiry is infused with and informed by personal experience, which differentiates it from objective modes of research. As stated in Chapter three, knowledge creation and acquisition is predicated on the individual’s ability to utilise proximal knowledge in the process of finding meaning and to contextualise focal phenomena.

Exploratory dialogue, like reflective conversations, can also be a collective activity during which individuals act to investigate a common problem or theme (focal). This is premised on Schön’s (1987) notion of a reflective practicum in which groups work collaboratively to solve a problem. This notion of collective knowledge creation through

social interaction, in which the knowledge creation trajectory moves from the tacit to the explicit, underlies both the TOKC and multi-practitioner arts-related PLR projects.

Reflection-in-action and reflection-on-action facilitate this dialectic conversation. Reflection-in-action is the conscious process of reflecting and evaluating during the execution of a task. As indicated above, this process is not pre-determined by a theoretical dictum but is rather an analytical process of reacting to the situation. Reflection-on-action is the process of evaluating a completed task or operation. This is a type of post-mortem of a process and final production. As mentioned in Chapter seven, reflection-in-action and reflection-on-action correlate with the notion of *kata*, which is inherent to the TOKC.

In line with the notion of tacit knowledge, this reflection does not necessarily have to occur in explicit knowledge formats. Schön (1983:104/162), in congruence with Polanyi (1962:5), advocates the use of discipline related processes, such as drawing or model making, as part of the reflective conversation. This notion of a tacit recording of the creative process, which could take on the form of a reflective journal or other types of visual records, is fundamental to the holistic communication of knowledge. The notion of reflective journals and the like has been adopted by PLR as it allows for the contextualisation of the chain of reasoning that underpins the artefact and the creation thereof (Biggs, 2006:6; cf. Chapter five). The level at which reflective conversations occur is dependent on the individual and collective experience. This is referred to as artistry in terms of PLR and human capital knowledge assets (Schön, 1987:22; Nonaka *et al.*, 2000:21) in terms of the TOKC. Artistry is the synthesis of advanced practical skill, experience, and theoretical knowledge in the execution of a task. Experience and the level of artistry are related to the depth of proximal knowledge that can be accessed. Advanced levels of artistry are more likely to lead to an innovative, original, artistic production.

In essence, PLR has embraced the notion that tacit knowledge is an important part of the holistic/non-reductionist conceptualisation of knowledge. Knowledge, in this context,

is viewed as contextualised practice, which consist of both tacit and explicit modalities. Additionally, the idea that the focal can result in an unpredictable proximal configuration of knowledge underlies the notion of an exploratory journey. As discussed in Chapter five, PLR is often a collaborative activity in which a theme is explored from tangential perspectives (cf. Chapter two). Reflective practice and social interaction are integral to knowledge creation. The TOKC is also predicated on the understanding that the tacit knowledge held by the individual is a valuable source of knowledge. Therefore, the TOKC is designed to utilise personal experience, intuition, and skill in the knowledge creation process. Multimodal knowledge communication is equally important in this context as ideas are often shared by means of visual, plastic, and sound-based media.

In light of the above, it is concluded that PLR and the TOKC draw on the conceptualisation of tacit knowledge and reflective practice. However, the compatibility of these two concepts is also dependant on whether they have the same paradigmatic foundation. In other words, they need to be compatible in terms of their ontological, epistemological, and methodological purpose and functioning.

As stated in Chapter five, the introduction of PLR into the university (academic) milieu was not a naturally evolving process that allowed for the development of a research paradigm capable of catering for the needs of creative practice. In contrast, PLR was forced into existing research structures and had to function within the dominant logic, which, for the most part, was the post-positivist, critical theory or constructivist paradigms. After reviewing these paradigms in Chapter four, it was concluded that they do not adequately cater for the subjective, tacit knowledge dimensions, which inculcates personal creative processes and the final artefact. This conclusion is supported by Gray and Malins (2004:20 cf. Biggs & Büchler, 2011:83, 87, 98) who state that an additional “artistic” paradigm that takes the characteristics of PLR into account is required. Heron and Reason (1997) introduced the participatory paradigm, as they believed that the other paradigms do not accommodate experiential and practical knowing. Although they were not specifically referring to PLR, in the context of this study, the participatory paradigm is deemed appropriate for PLR and the TOKC.

The reason for this is that the participatory paradigm advocates that experience and the knowledge gained from the way in which we interact with others and our environment, is a viable source of knowledge. This paradigm accommodates tacit knowledge, reflective practice, and social interaction as knowledge generating activities. In this context, experience can be represented in the symbolic forms of art and language that are prior to it (proximal) (Heron & Reason, 1997:276). The participatory paradigm is, therefore, a fundamental departure from the depersonalised objective notion of knowledge. In congruence with Polanyi, it offers a holistic notion of knowledge that emphasises experiential and bodily knowledge and rejects the mind-body duality.

Subjective-objective ontology underlies the participatory paradigm as knowledge is created by experience and the interaction with others. Our understanding of reality is co-created and gleaned from the multiple perspectives offered by the self and others. This is considered an inter-subjective field aimed at gaining a holistic picture of the phenomena under investigation by means of social interaction. The self-organising team of the TOKC and TBP project thus act as and correlate with the notion of inter-subjective fields. Additionally, the self-organising team and inter-subjective fields are similar to reflective practicums in which reflection-in-action and reflection-on-action occur. Therefore, this ontological point of departure is relevant to both the TOKC and multi-practitioner arts-related PLR projects as they rely on shared experience and utilisation of individual tacit knowledge.

Critical-subjectivity is the participatory paradigm's epistemological stance. Heron and Reason (1997:280) have developed an extended epistemology, which comprises of practical, experiential, presentational, and propositional knowledge. As stated in Chapter four, this is viewed as a refined version of Polanyi's tacit knowledge. For the most part, practical, experiential, and presentational knowledge relate to the tacit dimension, while propositional knowledge is concerned with the explicit dimension.

Knowledge conversion and knowledge creation is related to the methodological approach of the participatory paradigm. This methodology is informed by the subjective-

objective ontology, which utilises the extended epistemology in a dialectic process that is driven by social interaction. This is a cyclical process that moves through and results in practical, experiential, presentational, and propositional knowledge. As indicated in figure 5, *Bipolar congruence as dialectical process*, these four knowledge dimensions are grounded in and interact with each other (Heron, 1996:167). Similarly, the TOKC and multi-practitioner arts-related PLR projects move through cyclical processes that facilitate and generate tacit and explicit knowledge.

The participatory paradigm, which is underpinned by a subjective-objective ontology and critical-subjectivity epistemology, incorporates the notions of tacit knowledge and reflective practice, which are central to PLR and the TOKC. Additionally, this paradigm also supports co-operative inquiry as a means of creating knowledge. As such, PLR and the TOKC share the same contextualisation of knowledge and can be situated in the participatory paradigm.

However, even though an appropriate paradigm for the TOKC and PLR has been identified, the notion of positioning PLR within the academic context still needs to be addressed. This is necessary because multi-practitioner arts-related PLR projects function within the constraints of the universities' research domains. As such, a negotiated position for PLR that satisfies institutional needs and the characteristics of PLR is required.

9.1.2. What is the negotiated position of practice-led research in the academic context?

As mentioned in Chapter one and five, there are various opinions concerning research in the creative disciplines and a multitude of terms used to describe these activities. On one end of the spectrum, there are those who regard pure creative practice without textual explication as research (cf. Haseman, 2006; Olivier, 2010; Bolt, 2008). In this context, creative practice negates the need to engage with traditional research criteria. Biggs and Büchler (2008:6) refer to this as the isolationist position. On the other end of the spectrum, purely textual outputs in the art historical tradition are prioritised. The

middle ground, between these two approaches, is referred to as the situated position (Biggs & Büchler, 2008:6). In this context, research in the creative disciplines is a combination of tacit and explicit outcomes, which to a greater or lesser degree adhere to traditional research criteria.

The mainstream view (cf. Biggs, 2002a; Borgdorff, 2011; Candy & Edmonds, 2011; Mäkelä & Routarinne, 2006; Farber, 2010) is that the situated position, which is linked to research through art, is the most appropriate approach to research in the creative disciplines (Frayling, 1993:5). In the context of this study, the term PLR, which is also associated with research through art, is used.

In PLR, the creation of the artefact is central to the research process and is a knowledge generation activity. Reflective journals or other visualisations and the final artefact represent the tacit dimension, which is supported and contextualised in textual terms. In other words, PLR is regarded as original artistic production, which is contextualised by the artist within a broader cultural, historical, and critical framework (Scrivener & Chapman, 2004; cf. Farber & Mäkelä, 2010; Scrivener, 2009:69-71).

This double articulation of practice and theory helps navigate and understand the complex issues that are often addressed in PLR projects. PLR is routinely conducted as a collaborative activity, during which a theme is explored from different interdisciplinary perspectives. Such collaboration is a dynamic process since participants have diverse frames of reference, knowledge, and skills, and they learn through interactions with each other (Marley & Greyling, 2011:167-168; Borgdorff, 2011:53). As mentioned in the previous section, this type of collaborative research process is also a characteristic of the participatory paradigm. The TCC and TBP projects are examples of collaborative arts-related PLR.

PLR in the situated position needs to adhere to, but not be restricted by, traditional research criteria. Generally, research is considered to be a systematic and rigorous scientific study or critical investigation conducted intentionally in order to establish new

facts, insight and information, which are used to reach new conclusions. These new insights and conclusions are distributed to and validated by a peer group, which determines the value of the research (Scrivener, 2009:69).

The method condition (a systematic investigation) requires a method that provides a logical answer to the phenomena being investigated (Scrivener, 2009:70-71). This implies that a research question is connected with the answer through contextual argumentation.

As mentioned earlier, PLR is considered a contextualised journey of discovery undertaken with the purpose of creating original artefacts that contribute to knowledge. This process offers a multitude of possible avenues of exploration and is unpredictable and changeable. In contrast to traditional research, which moves from the “known to the unknown,” PLR moves from the “unknown to the known” (Sullivan, 2011:100). The method is often determined by practice (and the proximal dimension that practice might trigger) and is thus not formulaic in nature. This does not mean that a research question is not formulated, but it does mean that the process is not confined by a predetermined hypothesis.

In the PLR context, the defence of an argument or claim to originality is substantiated by the presentation of the line of reasoning. According to Biggs and Büchler (2007:69), this line of reasoning should be clear, intuitive, and well motivated. Knowledge is presented in multimodal formats, thus utilising both the tacit and explicit knowledge dimensions. In this sense, writing in combination with the artefact is more than description; it is a way of thinking through complex issues by identifying seminal moments and insights. If PLR were placed within the participatory paradigm, this would imply that the communication of practical, experiential, presentational, and propositional knowledge would mutually reinforce the epistemological gain.

As discussed in Chapter five, Scrivener and Chapman (2004) developed the creative production cycle, which is a structured method appropriate to explicating the line of

reasoning involved in PLR. This method takes the serendipitous nature of PLR into account and demonstrates that research in this context can be conducted systematically, and provides a contextualised summation of the phenomena being investigated.

The intentionality condition clause of research implies the identification of an answer to a specific research question. As stated above, PLR is an exploratory journey, which means that a question-hypothesis model problematic. However, the formulation of a research question is only a hindrance if the serendipitous nature of PLR is restrained by it. In terms of creative practice, Schön (1983) suggests that, rather than a specific question, one could frame the phenomena being investigated as a theme (cf. Biggs and Büchler, 2008:9). The notion of demarcating the area of investigation by means of a theme is particularly useful in collaborative PLR projects. In this context, participants investigate the theme with different worldviews thus creating a more comprehensive picture of the theme under investigation. The TCC and TBP projects can both be considered the intentional investigation of a particular theme.

The goal condition of research is to acquire new knowledge that is relevant to a particular community of practice. As discussed, in the PLR context, this implies a contextualised line of reasoning, which is communicated in tacit and explicit knowledge formats. The artistic/authorial perspective, which is underpinned by reflective practice, is fundamental to this process. In this context, the tacit dimension allows for and invites imaginative interpretations. By contrast, the formal syntax of language allows the artist to transcend the artefact and place it in a historical, cultural, and critical context. The subjective-objective ontology and the critical-subjective epistemology of the participatory paradigm are thus relevant in this regard.

In terms of the communication of PLR, as stated above, this requires a combination of tacit and explicit formats. However, because events such as exhibitions and performances are temporal in nature, they will not be able to be retrieved after the event.

As such, in order to preserve such events as research data, they should be recorded as extensively as possible and made available via websites or similar databases.

Therefore, it is concluded that PLR can be accommodated in and contribute to the academic context if it clarifies its paradigmatic position from the outset. The intent of PLR is thus to expand the notion of art and contribute to the knowledge base of the discipline by contributing original artworks or arts processes that uncover new facts and relationships and reveal cognitive understanding and insight. Arts-related PLR therefore introduces to the academic research context, the type of understanding and thinking inherent to the artistic process.

9.1.3 How does the analysis of the *Transgressions and Boundaries of the Page* project show evidence and establish the possibility that the theory of organisational knowledge creation could be an appropriate management model for multi-practitioner arts-related practice-led research projects?

In this section, the analysis of the TBP project by means of the TOKC conducted in Chapter eight is reviewed. The function of this review is to clarify how the execution of the TBP project provides evidence that the TOKC is a relevant management model for future multi-practitioner arts-related projects.

As stated earlier, the TOKC is a management model in which individual tacit knowledge is surfaced, amplified, enriched, and converted into explicit knowledge by means of social interaction to the benefit of the whole organisation (cf. Chapters one and six). Essentially, a self-organising team is chosen to address a particular problem or explore a particular concept. This self-organising team is selected by middle managers and is comprised of individuals with experiential, conceptual, and technical knowledge. These teams are often interdisciplinary so that the issue being investigated is approached from different points of view. This collates with the notion of reflective practicums and the approach used when exploring a theme in multi-practitioner arts-related PLR projects conducted at the NWU. As such, this cycle of knowledge creation necessitates reflection-in-action and reflection-on-action.

The TOKC involves four knowledge conversion levels, each of which consists of a SECI mode, *ba* and knowledge assets. In keeping with the idea that the TOKC is compatible with the participatory paradigm, the knowledge dimensions of the participatory paradigm's extended epistemology are correlated with specific knowledge assets and levels of the TOKC. The purpose for correlating the knowledge dimensions with the TOKC knowledge assets is to clarify the epistemological functioning of each level. As such, the following correlations discussed in Chapter seven can be identified: experiential knowledge with experiential knowledge assets; practical knowledge with routine knowledge assets; presentational knowledge with conceptual knowledge assets; propositional knowledge with systematic knowledge assets.

Nonaka *et al*, generally advocate that the knowledge conversion cycle will start with socialisation and move towards internalisation. However, in the context of this study, the *Tracking Creative Creatures* (TCC) project is viewed as a knowledge creation activity that informed the creation of the TBP project (cf. Chapter four). Therefore, the evaluation of the TBP project starts with internalisation and ends with combination. Additionally, as discussed in Chapter two, the multi-practitioner arts-related PLR projects conducted at the NWU were managed in four phases, which were also correlated to the knowledge conversion levels. Tables 9 to 12 in Chapter eight give an overview of these correlations.

In terms of the TBP project, phase one (conceptualisation, planning and preparation), which took place from August 2008 to March 2009, was by means of level one (routine knowledge assets, internalization, exercising *ba* and practical knowledge). The purpose here was to ascertain whether this level would facilitate explicit to tacit knowledge exchange.

In this regard, the execution of the TCC project and subsequent academic articles written about the project served as explicit knowledge. This explicit knowledge was utilised to draft a project proposal for the TBP project (Addendum 3). In this proposal, the research goals, objectives, methods, and strategy were clarified. The discussion

between the management team and subsequent information sessions held by participants are viewed as an exercising *ba*. In addition routine knowledge assets used to manage the TBP project was established and put to practical use (cf. Chapter two and eight).

Internalisation occurred in this phase and level as explicit knowledge was converted into practical “know how” and shared with members of the group. The project managers served as middle managers who identified a self-organising team contingent on their knowledge assets. Additionally, the project as a whole was premised on the tacit to explicit knowledge creation cycle, which in essence commenced in phase two and on level two.

Phase two was the knowledge creation phase (March 2009 to January 2010) of the TBP project and was analysed by means of level two (experiential knowledge assets, socialisation, initiating *ba* and experiential knowledge).

Tacit to tacit knowledge conversion, which is initiated by means of social interaction, is the most important aspect of this level and phase. This phase of the TBP project was primarily concerned with the project launch, the execution of practical workshops, the organisation and coordination of community projects and the creation of individual and collaborative artist’s books (cf. Chapter two and eight).

Experiential knowledge, which is the interpersonal sharing of experience that facilitates the tacit to tacit knowledge exchange, was evident in all of these activities. In this context, the utilisation of experiential knowledge assets is concerned with creating the opportunity and space (initiating *ba*) for potential knowledge exchange. The creation and management of potential knowledge, therefore, has to do with selecting and activating a diverse self-organising team that might initiate unforeseen areas of exploration. In this context, socialisation, which is the process of utilising shared experience and initiating interaction to create the tacit to tacit knowledge exchange and conversion, is relevant.

The aim is to remove barriers between the self and others in order to facilitate equal participation.

In the context of the TBP project, the project launch could be considered a process of socialisation conducted within an initiating *ba*. During the project launch, the TBP project was contextualised and a shared (albeit broad) knowledge vision was established. This event also served to consolidate and activate the self-organising team and allowed for ample social interaction during which experiential knowledge was exchanged. Additionally, the practical bookbinding and creative writing workshops that served the same purpose were conducted. During these events and workshops, tacit knowledge was exchanged and resulted in supplementary tacit knowledge.

One of the most important activities of this phase and the project, was the individually or collaborative creation of the artist's books. As such, these books were considered the tacit dimension, which informs and underpins the explicit exploration started in and on phase and level three. Therefore, the knowledge conversion mechanism associated with level two is potentially relevant to phase two of multi-practitioner arts-related PLR projects.

Phase three which was the knowledge presentation and communication (February 2010 to July 2010) phase and correlates with level three (conceptual knowledge assets, externalisation, dialoguing *ba* and presentational knowledge) and is concerned with tacit to explicit knowledge conversion.

The knowledge presentation and communication phase of the TBP project entailed the exhibitions, walkabouts, lectures and the writing of informal articles for the exhibition catalogue. Therefore, the process of externalisation, which is concerned with the tacit to explicit knowledge conversion, was the focus. This knowledge conversion was initiated by asking the artists to provide a written contextualisation of their work, which was exhibited with the artefact. In this context, some aspects of the tacit knowledge dimension were formalised by the artist and made available to a broader audience. The presentation of both tacit and explicit knowledge therefore facilitated the utilisation of

conceptual knowledge assets. The theoretical knowledge held by members of the group was thus used to discuss and explore patterns of meaning during the exhibition walkabouts. These walkabouts involved the management team, project participants, members of the public and students. They were conducted as open-ended exploratory discussions, which allowed for the identification of themes and further areas of investigation. These discussions are considered to be dialoguing *ba*, which is a space in which dialogue is consciously initiated and facilitated.

Additionally, artists and other participants were asked to write informal articles for the project print catalogue. The final catalogue, which contains sixteen short articles, is indicative of the externalisation process. In this context, the tacit knowledge gained during the execution of the project was framed by means of theory and presented to the audience.

Therefore, it can be concluded that the type of activities conducted during this phase of the TBP project (or projects of this nature) would benefit from the knowledge conversion mechanisms associated with level three of the TOKC.

Phase four (formalisation and dissemination of knowledge; July 2010 to December 2011) relates to level four (systemic knowledge assets, systemic *ba*, combination and propositional knowledge). Explicit to explicit knowledge conversion occurs during this phase and level.

As mentioned, the final phase of the TBP project was concerned with the formalisation and dissemination of research, which entailed the exploration of the artefact by means of academic research articles. The explicit knowledge created in phase three is reconfigured and reconceptualised through its combination with other explicit or theoretical knowledge. As discussed in Chapters two and eight, the significant events that were aimed at producing articles for the *Literator* (2012:1[33]) were: i) a series of three weekly research meetings between members of the History of Art, Graphic Design and Creative Writing subject groups; ii) a research colloquium (6 April 2011); iii) an

academic writing workshop (13 June 2011) and iv) the TBP project research colloquium (13 -15 July 2011).

All of these activities were focused on understanding and exploring the research context inherent to this multi-practitioner arts-related PLR project. The focus was on producing an accredited journal of *Literator* (2012:1[33]), which presented the explicit knowledge dimension. In the context of this project and in keeping with PLR, this edition of the *Literator* contained hyperlinks to the project website that displayed the images of the artefacts and exhibitions as well as provided additional information.

Therefore, these activities are viewed as combination that produced propositional knowledge through the utilisation of conceptual and systemic knowledge assets. In terms of *ba*, the TOKC advocates systemic *ba* (which are virtual databases or systems, such as the peer review process) as relevant to this level. It is acknowledged that this type of *ba* assists in the combination process. However, in the context of this study, it was found that social interaction, such as the research meetings, workshops and colloquia greatly assisted the knowledge creation process. Therefore, it is contended that the dialoguing *ba* of level three should also be continued on level four.

As can be concluded from the above, phase four of the TBP project and level four of the TOKC have the same knowledge conversion and dissemination objectives. Consequently, the utilisation of the conversion mechanism would benefit projects of this nature.

9.2 Concluding remarks

As stated in chapter One PLR is still considered a recent area of research and is still negotiating a place in the academic context. As such creative practitioners both internationally and in South Africa are engaged in placing this type of research on a rigorous and well-formulated basis. In service of this, this study explored the definition of knowledge and the related research paradigms relevant to PLR. Additionally the notion of collaborative interaction as a productive knowledge creation activity is explored.

In this context, the TOKC is proposed and considered an appropriate management model for future multi-practitioner arts-related PLR projects to be conducted at the NWU. This conclusion is premised on the fact that both PLR and the TOKC share a knowledge vision that is contingent on the notion of tacit knowledge and reflective practice. The paradigm that underpins and inculcates tacit knowledge and reflective practice is the participatory paradigm.

In congruence with both PLR and the TOKC, the participatory paradigm advocates a subjective-objective ontology, which promotes the notion of social interaction as a knowledge-generating endeavour. The overarching epistemological stance is critical subjectivity. This is achieved by dividing knowledge into practical, experiential, presentational, and propositional knowledge dimensions, which interact to give a holistic picture of the research topic. This is a more nuanced version of tacit knowledge and underlines the reflective conversation, which is utilised in knowledge exploration. Additionally, the methodological process moves from the experiential or tacit to the explicit by means of transactional, reflective dialogue. However, in the PLR context, the notion of communicating both the tacit and explicit knowledge dimensions in the final phase of projects is important. Consequently, the current focus on the explicit dimension advocated on level four of the TOKC needs to be adapted to include knowledge formats that communicate the tacit dimension in the PLR context.

In light of the above, this research contributes to the understanding and development of PLR, in that it offers a management approach that takes cognisance of the specific characteristics of said research. PLR. Additionally, the definition of knowledge and the paradigmatic context within which it is placed may be beneficial to creative practitioners conducting PLR.

While study focused on large multi-practitioner arts-related PLR projects conducted within the Faculty of Art at the NWU's Potchefstroom campus. However, it is contended that this management approach could be applied to other collaborative PLR projects of this nature. Some aspects that could be explored in more detail are the role and

functioning of branding in the knowledge creation process. Additionally, an exploration of alternative research formats, which effectively communicate both, the tacit and explicit knowledge dimensions needs to be undertaken. Another issue related to this is the manner in which one might be able to integrate and communicate the tacit dimension in the existing journal-based peer review system.

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APPENDIX 1

APPENDIX 2

APPENDIX 3

Application for Blue Skies funding: National Research Foundation:

Transgressions and Boundaries of the Page: a interdisciplinary exploration of a practice-based research project by means of the artist book.

1. PROBLEM IDENTIFICATION

Practice-based research in the creative disciplines is increasingly becoming a relevant and established research methodology and strategy to *explore creative outputs as research* and to *theorise creative work* (Gray & Malins, 2004; Harper, 2006). These strategies are growing in popularity and sophistication, especially in terms of *individual research*. Practice-based research internationally is also characterised by collaborative efforts and the value thereof is increasingly recognised (De Freitas, 2006). It is argued by the UK Council for Graduate Education (2001) that practice-based research “will develop more rapidly if there is a cross institutional fertilisation as well as cross-disciplinary co-operation. The intellectual and artistic value is obvious in sharing research ideas, supervision and facilities in order to open up debate, to offer students and staff a richer environment, and to generate original work across sub-discipline boundaries”.

In South Africa the notion of practice-based research is still in a developmental phase, and is being debated from various perspectives, for example the issue of recognising creative outputs as research by the Department of Education (Klopper 2008).

In light of the above mentioned it is in the interest of practice-based research in South Africa to develop an interdisciplinary project which will lead to an understanding of the management of collaborative practice-based research and empower creative individuals to formalise their practice as research. The question thus arises how one would go about to effectively design, manage and facilitate a project which will allow practitioners to pursue their creativity, will result in creative outputs and will also facilitate and deliver formal research outputs.

2. RATIONALE AND MOTIVATION

Creative practitioners often participate in interdisciplinary multi-practitioner creative projects, for example themed group exhibitions, collaborative writing projects, performance poetry and performance art. However, these projects are rarely managed or conceptualised with a view to generate research findings as such.

Practice-based research (and related terms such as practice-led research, practitioner based enquiry, creative practice as research and research through practice) refers to creative work in a number of disciplines (fine art, graphic design, creative writing, performing arts) characterised by their reliance on artistic activities and creative outputs. Practice-based research, by implication, suggests that this artistic activity and resulting creative output should be regarded as a type of research. Furthermore, Gothe (2002) indicates that art practice and practice-based research, in order to function optimally in a tertiary environment where it is typically situated, need direction and discussion in order to become recognised as professional and academic pursuits.

For the applicants, it follows that doing research focused on a variety of aspects relevant to the creative disciplines and the creative industries is very important, particularly because such research is foreseen as an on-going process that will attempt to explore creative outputs and concomitant theorising about the creative process and product more fully. There is thus a desire among the applicants to explore the growing emphasis on the execution and articulation of practice-based research (see also Mafe & Brown, 2006). Based on experience gathered during the management of a previous interdisciplinary practice-based collaborative project (*Tracking Creative Creatures*), the researchers came to the realisation that such a project provides a multitude of research possibilities and opportunities that can be investigated from various perspectives.

This application also entails emphasis on the importance of education and training – not only for creative practitioners and researchers who will be involved in this project, but also because the applicants are in the education sector and will have the opportunity of extending postgraduate offerings as well as feeding the research into all levels of the tertiary programme. Last but not least, education and community involvement also form part of the envisaged practice-based research project.

3. A brief description of proposed project, which will provide the context and space for creative practice and research:

Transgressions and Boundaries of the Page: a interdisciplinary exploration of a practice-based research project by means of the artist book.

This project has been conceptualised in order to facilitate cross-disciplinary practice-based research. An interdisciplinary research team will manage this project and make contributions from their fields of expertise, and will be involved in both creative practice and research

facilitation. Apart from the team members, approximately 25 artists from diverse creative disciplines will contribute in the project. The participants will include established and upcoming creatives who practice within the fields of visual arts (fine arts, graphic design, illustrators), creative writing (poets, novelists, children's books authors), as well as related fields of architecture and language technology. After a workshop (which will serve as the launch of the project) during which the participants will be given a contextual framework in terms of practice-based research, the history of the book, and the artist's book, the participants will be requested to produce artist's books. These books can be created as individual or collaborative creative efforts.

The creative outputs will be exhibited in a group exhibition at the Word Festival at Stellenbosch during March 2010 as well as the North-West University Gallery. We foresee a number of innovative and original creative outputs in the form of artist's books and reflective artists' journals, themselves a type of practice-based research. The books created and practice based research reports (journals) will serve as source material for further research by theorists, practitioners (or a combination of the two) and project co-ordinators alike. This project will be concluded with a national conference during which research findings will be presented. An international expert in the field of practice based research will be invited as keynote speaker. This conference will contribute to the development of skills and expertise among South African scholars.

Regarding the nature of practice-based research, it should be noted that this is essentially a pursuit that transcends boundaries between disciplines particularly because practice-based research involves not only the creative process of putting forth creative products (artworks, literature, performances and the like), but also researchers who may or may not be situated in a practice-based discipline. We have decided to use the term *interdisciplinary* in this regard, as the term reflects the notion of transcending conventional boundaries between disciplines. Other terms linked to this concept are *interdisciplinary studies* and *multi-disciplinary studies*, both of which are useful but do not expressly refer to the fact that discipline boundaries can, in a profound sense, be transcended by the pursuits of practice-based research. This situates our approach to practice-based research in current discourse about the field as practice-based research:

“... can be seen as an exercise in ‘consciousness rising’. It does this by empowering the creative worker and the surrounding culture in general, by allowing the voice of that ‘alternative’ logic of

practise to be made accessible and heard. This is especially true as our making environments and contexts begin to shift and become more complex and discipline boundaries become increasingly blurred” (Mafe & Brown, 2006).

The term ‘interdisciplinary’ also encapsulates the notion of synergy between participants from different disciplines; as well as the idea that the combined creative and research output amounts to more than the sum of the parts.

4. Past experience of managing such a project:

As stated this section has been omitted as it is a repetition information presented in 6.4.

5. *Transgressions and Boundaries of the Page*

The project that is the focus of the current application, *Transgressions and Boundaries of the Page: a interdisciplinary exploration of a practice-based research project by means of the artist’s book*, will explore the possibilities of artists’ books as practice-based research artefacts.

The notion of the book will allow an appropriate space in which the inherent/embedded skills in the departments of creative writing and graphic design can be utilised to stimulate research. Creative writing and graphic design are primarily concerned with the conceptualisation and creative realisation by means of practical output. Although these two disciplines work within a theoretical framework, literary studies and history of art are the disciplines which are principally concerned with the reading and interpretation of the text (the term text here includes visual texts such as images). The collaborative participation of these disciplines will allow practice and theory to form a coherent project base. This will constitute a central platform from where the project will be launched to the creative community (practising artists) selected from the broader South African arts community.

6. The book and the artist’s book

In terms of the choice of the project, a short discussion is necessitated at this point. There seems to be a renewed interest in the book from different perspectives: The proliferation of digital media has allowed new possibilities and interdisciplinary questioning and exploration of the book, and, concurrently, a reactionary re-discovery and re-evaluation of the materiality of the book is evident (Drucker, 1997; Camile, 1998). Additionally, the very history of the book seems to be an expanding discipline with related aspects such as the history of authorship, reading and publishing, book culture, the book as art and book production (Clark, 2008). The historical

importance of the book is particularly relevant in the African context with the preservation and dissemination of African literature with particular reference to the Timbuktu manuscripts (Minicka, 2008).

More specifically, this research project will focus on the *artist's book* as artefact. It is therefore an attempt to approach the notion of the book in an expanded manner. The codex form of the book as artefact implies certain conventions and boundaries. The artist's book is the ideal vehicle to expand and transgress these conventions (Drucker, 1997). Artist's books are contained units which function as conceptual artworks and allow for effective critical reading.

Artists' books also function outside the constraints of the publishing industry, and tend to be based on individual artistic vision, conceptualisation and execution. The codex form of the conventional book is often challenged in artists' books or explored by means of various media and the combinations thereof:

“Taking the structure of the book beyond everyday expectations is often a goal of the artist's book. Other important aspects of artists' books are: the use of cross-disciplinary media, the production of the work through an accessible means, and the reaction against the established art world/art market” (Rossmann, 2003).

The artist's book is by its very nature based on interdisciplinary approaches, and allows for play and exploration by creative individuals from various disciplines. It is hoped that the creative individuals involved will take up the challenge of exploring the transient boundaries of the book which challenge genre by exploring alternative aspects of the codex form of the book. Issues which can be explored are form and content, image and text, media and intermediality, narrative structure, interaction and interactivity, too name but a few of many possible derivations. Challenging the notion of linear reading with multi-narrative and multi-layered textual interpretations are also aspects that could form part of the exploration.

7. Research aims

To design and facilitate a interdisciplinary multi-practitioner creative project which will allow practitioners to pursue their creativity, will result in creative outputs and enable and deliver formal research, and contribute to the knowledge base concerning practice based research.

A secondary aim is to reflect on the efficacy of the facilitation processes in order to provide systematic and tested guidelines for future collaborative projects.

8. Research objectives

The objectives of the current project are aimed towards refining the previous project's findings, in order to develop a structured approach that would

- create a opportunity/space for creative practice across disciplines that could serve as practice-based research or research data upon which formal research can be conducted
- utilise the creative group dynamics of such a project in order to stimulate interdisciplinary research practice
- enable practitioners to understand the notion of practice-based research and formalise their practice more purposefully as research
- allow for critical reflection and evaluation of the research approach/process, also with a view to producing formal research outputs in the form of accredited journal articles
- contribute to the current discourse of practice-based research, with its diverse approaches and applications and enhance understanding of the ways in which research can be conceptualised with a view to contribute to the national and international debate on the status of practice-based research (and collaborative research, and research-as-practice).

9. Work plan: time frame:

First year:

- Detailed critical reflection of the *Creative creatures*- project to formulate a conceptual approach for the envisaged outcomes
- Literature review and establishment of theoretical framework and management approach
- Identification and invitation of participants (artists)
- Workshop to contextualise the project and inform the participants of the nature thereof; to equip participants with knowledge and skills to conduct their own practice-based research; to inform the participants about the creative domain of the artist's book and history of the book; to establish possible creative and formal collaboration; etc.
- Planning and execution of individual and/or collaborative creative outputs
- Planning and execution of community based projects by means of the North-West University Centre of Creativity Studies
- On-going facilitation, data collection and documentation

Second year:

- Exhibition of the creative outputs; public participation and peer review; publication of catalogue (printed and digital format)

- Documentation and analysis of creative outputs by participating researchers
- On-going analysis and dissemination of research data (e.g. catalogue, video, website)
- Formalisation of research (in the form of articles that are written).

Third year:

- Post-project reflection national conference
- Refined model/framework/approach for interdisciplinary multi-practitioner creative projects
- Publishing of research findings (articles in accredited journals such as *Image and text*, *Literator*, *New Writing*, *The international journal of the book*, *Journal of mixed methods research*)

(The above process will, in turn, give rise to future projects that can explore further dimensions of practice-based research.)

10. Research methods

The project will be framed within the context of practice-based research. The reason for choosing this research model is that it is principally concerned with practice and knowledge gained by reflecting during practice (the notion of the reflective practitioner (and reflection *in*, *during* and *on* practice). Practice-based research is also relevant as the researchers will not only be reflecting on the individual creative projects but will also review the collective collaborative project and conduct research in this context.

With regard to the role of the researcher, Gray and Malins (2004) assert that in practice-based research, the researcher *is* the practitioner, which means that his or her role is multifaceted and may include the following: the researcher is the generator of research material (works of art, for example) – he or she thus participates in the creative process. Furthermore, he or she is a self-observer through reflection on action and in action (evident in reflective artists' journals), and through discussion with others. In the third place, the practitioner-researcher is also an observer of others by placing the research in context, and with a view to gaining other perspectives; and lastly, he or she may be a co-researcher, facilitator and research manager, especially for a collaborative project (Gray & Malins, 2004).

In their article *Research through practice: positioning the practitioner as researcher* Douglas *et al.* (2000) set out a recommended method for conducting practice-based research. The authors distinguish between three research routes in the arts, namely *formal research*, *personal research* and *research as critical practice*, and indicate that the creative practitioner should note

the different functions of each route in order to position himself as a researcher in a complex field, taking note of the different requirements of each.

Formal research requires a clear statement of aims and objectives, methodological articulation and projected outcomes that will be in writing. In *personal research*, research and practice are fused and the knowledge that is gained is embodied in the artwork which might also be accompanied by professional documentation (such as artists' journals). *Research as critical practice* is aimed at working towards a project, but is critical and experimental in nature in order to provoke the professional to adopt fresh approaches to the creative process. Research outputs include finished work as product, but also extend to artists' talks, discussion platforms and other exchanges. This approach is excellently suited for collaboration, individual artistic development within such collaboration, and also presents a traceable and accountable process (as such, it mirrors both personal and formal research).

We foresee that this project will deliver research in these three research routes. The structuring of the project will thus take into account that some practitioners will not conduct formal research or critical practice. However, the involvement of individuals who are more concerned with the academic reading of texts (history of art and literary studies) will ensure that these individual projects could still be utilised as research material (preferably in collaboration with the practitioner/creator) to deliver research output for both parties. The involvement of these participants will also contribute to the discourse regarding practice and research. In essence this means that there is a comfortable space for both formal academic research and creative practice and an ideas forum for cross-pollination between the two.

According to Douglas *et al.* (2000) collaborative case studies help to create new roles for artists, new ways of working and possible new contexts for practice. Their method comprises the following: the collaborative project itself is *described* (together with aims of the project) and the project is used to generate primary research data through the actual process of artists' collaboration. The nature of collaboration is described through analysis of the research projects, and this is also informed by literature relevant to the project and field of study. Comparative *analyses* of project data give rise to further extrapolation of the collaborative process in terms of its core characteristics, which in turn give rise to *findings* that are supported by referring to individual projects within the collaboration, relevant literature and comparative readings of artists and other collaborations. These authors stress that the creative practice is fully part of the research process, but indicate that a measure of documentation, analysis and literature

contextualisation are also necessary in order to complete the project as “research as critical practice”.

Clearly here is a mix of research methods, involving a range of approaches from action research, research in action, reflective practice (*on, during, and also after* the production of creative work) experimental methodologies and the more traditional literature study. We believe that the design of this project will deliver research on various levels and inform and contribute to the debate concerning the notion of creative practice as practice based research.

11. Potential human resources development

- The involvement of participants from various disciplines (researchers, artists, researcher/artists) will contribute to the development of research skills both in and outside academic institutions. Future projects will draw on skills gained in this manner.
- Three MA students (in Creative Writing and Graphic Design) as well as assistants will be involved in the project. They would be involved in all aspects of the planning and execution of the project, and as a result they will gain insight and practical experience in the management and facilitating of a interdisciplinary multi-practitioner practice-based research project.

12. Redress

- Community development is envisaged in that children from various schools (including township schools and other disadvantaged areas) will participate in sub-projects and will therefore be empowered regarding creative production and reflection, and will be exposed to creative ideas and growth.

13. Potential outcomes

The following outcomes are envisaged for this project:

- Exhibition of artist's books (± 25)
- Published research papers
- The creation of innovative book formats which could possibly be adapted for commercial applications
- Catalogue and website for the dissemination of creative outputs as well as research outputs

- A variety of individual and collaborative creative/research outcomes related to individual interests and skills
- Refined framework for interdisciplinary multi-practitioner practice based research projects (including the design, conceptualisation, facilitating, implementation and validation of practice-based research)
- Increased awareness of research in creative disciplines; conversation and critical discourse as a result of the national conference, exhibition and publications.

14. Progress to date

Tracking creative creatures project led to the development of a model, general framework and appropriate approach for interdisciplinary multi-practitioner creative projects. This model was derived from the following articles:

- L Combrink & I Marley. Practice-based research: *Tracking Creative Creatures* in a research context. *Literator* 29 (3) Des 2008.
- SF Greyling & I Marley. *Op die spoor van kreatiewe kreature: 'n interdisciplinêre ondersoek na die kreatiewe proses: Projekbeskrywing*. *Literator* 29 (3) Des 2008.

A special edition of the accredited journal *Literator* (29 [3] Des 2008) was dedicated to the project and will contain seven peer-reviewed articles, creative work from the project, as well as a revised digital catalogue.

15. Co-investigators

The following individuals will form part of the research team as co-investigators:

Ian Marley (NWU. Co-project leader, Head of department Graphic Design, practicing artist.

Project management and conceptualisation, contribute creative and theoretical output.)

Leora Farber (UJ. Director: FADA Research Centre & Postgraduate Studies, practicing artist.

Will serve in an advisory capacity in terms of research in the creative disciplines, and contribute creative and theoretical output.)

Rita Swanepoel (NWU. Leader of proposed research niche, art historian and researcher. Will

contribute in terms of formal research and scholarly interpretation of texts.)

Louisemarié Combrink (NWU. Art historian and practising artist. Will contribute in terms of

theoretical understanding of practice-based research; will also produce creative and theoretical outputs.)

David Paton (UJ. Head of Department, Studio Practice & Postgraduate Studies; practising artist with a sound theoretical and practical knowledge of artist's books, will contribute by means of creative and theoretical outputs.)

16. Collaborators

The following individuals have been approached as collaborators:

Prof. John Gouws (Rhodes University, Grahamstown. Extraordinary Professor, NWU; book historian)

Gordon Froud (UJ, Lecturer: Sculpture & Studio Practice; gallery owner and curator; practicing artist)

Dr. Maritha Snyman (Managing director Lapa Publishers; writer)

Prof. Hein Viljoen (NWU. Director: Research Unit: Languages and Literature in the SA Context. Will contribute to the theoretical conceptualisation of borders, liminal spaces and interstices, formal research and interpretation of texts.)

Dedre Pretorius (UJ. Head of Department Graphic Design; practicing artist)

Jean le Clus(NWU. Manager of Centre of Creativity Studies)

Diverse established and emerging artists and writers (25 in total), as well as other participants who could contribute to the project in order to transgress conventional boundaries and promote innovative thinking such as an architect, an engineer, and CText (Centre for Text Technology – a research centre at the North-West University).

Appendix 4:

Transgressions and Boundaries of the Page printed catalogue