TITLE: Utilising a ***POPC*** *(Psychological, Organisational, Philosophical, Cultural)* methodology to better understand the phenomena of knowledge transfer in a third sector organisation.

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ABSTRACT

To date, there have been numerous valuable and informative studies which examine the significance of knowledge and knowledge transfer (Mitton et al. 2007) in a healthcare environment, most notably a review of health sector and generic management literature (Crilly et al. 2010). Informed by this literal positioning, this paper sets out to explain the usefulness in adopting a POPC methodology (Fascia 2015) where interpretation of knowledge transfer mechanisms and management models (McAdam & McCreedy 1999). continues to draw significant incredulity. This case study will consider the management structure and resource implication of a third sector organisation and establish if the current resource utilisation strategies adopted by the organisation can be improved. The literature review scope included healthcare and generic management domains (Thompson 2007). Using a POPC methodology (Fascia 2015), data collection included perspectives of organisational processes and structures, disciplinary fields, knowledge transfer and associations to facilitate knowledge sharing. Findings reveal that using theoretical and conceptual epistemology to explain simple to complex organisational development is only partly successful. Similarly, literature describing overarching resource based views of the firm (Argote & Ingram 2000), is not currently relevant to third sector organisations. The outcome of the study will therefore adopt a three stage recommendation strategy for third sector organisations wishing to incorporate POPC into any developmental strategies: (a) utilisation of a resource based view; (b) development of internal infrastructure, and (c) adopting a theoretical approach to strategy development to facilitate knowledge sharing and mobilisation.

Keywords: Knowledge transfer; Knowledge management; Epistemology; third sector; chronic pain; Resource based view; Critical perspective; Organisations; Literature review; POPC.

Type: CASE STUDY; Third Sector Organisation. The third sector organisation referred to here is a charitable organisation based in Scotland and offers self- management interventions to those suffering from the debilitating effects of Chronic Pain, their families, carers and colleagues.

BACKGROUND

When examining the concept of knowledge transfer within an organisation, justifiably perhaps, a majority of literature focus is positioned predominantly within a business context and explained as constituent parts of a process which are needed to support competitive advantage (Kogut and Zander 1992).

Understandably, the management of knowledge and knowledge transfer is well-documented (Mitton et al. 2007), and has emerged as a rapidly growing field of literature. However, because of the complex sphere of interpretation surrounding this interaction, literature often polarises, affirming the conclusion that strategic management strategies need to continually evaluate the characteristics of knowledge within the organisation when devising performance related infrastructures (Szulanski 1996) and (McAdam & McCreedy 1999). Underlying these views however, exists fundamental disagreements on the definition of knowledge. Wherein, disingenuous rhetoric describing resource based view [RBV] (Argote & Ingram 2000), and some knowledge based views [KBV] overarched by a foucaldian perspective of interpretive rationale (Foucalt 1980). However, there are additional complications to consider when establishing an understanding of the organisation structure and efficiency. For example, the ability of tacit knowledge conversion into explicit knowledge (Polanyi, 1966), whereby, effecting which knowledge transfer scenarios best reduce barriers to knowledge transfer efficiency and which increased knowledge mobility. The implications of this argument are significant in both contextual and implicit terms, as existence of a dual position of knowledge then undermines concepts, which are central to both theory and practice within the RBV and KBV. Further, this position of duality separates the acceptance of creation and acquisition of knowledge, suggesting that without expert management, knowledge is unable to be created as a resource or to have management value. This is partly due to the incompleteness of analytical concepts, which may overarch data collection and data synthesis related to the phenomena (Foucault 1980). Additionally, given the complex and multifarious nature of knowledge in an organisation, it is perhaps not surprising that many differing viewpoints exist (Polanyi 1966).

In an attempt to circumvent indistinctness and draw together the varying degree of conceptualisation,

the use of an innovative methodology reduces ambiguity when discussing either the use of, or the analysis of, a knowledge transfer scenario. Thus, in the realms of business usefulness or organisational contexts, knowledge can be categorised and assessed as an inductive wave of experience (Fascia 2015). Moreover, effecting almost every decision making process in the organisation, and need not be subjugated to a simplified resource based or knowledge based view of the firm.

CASE STUDY TYPE: *Single case*

This case study attempts to derive an in-depth understanding of a single organisation and is set within the real-world contexts of an organisation (e.g., Bromley, 1986, p. 1). The closeness of the study aims to produce an invaluable and deep understanding of the organisation structures and mechanisms at work. The structure and justification of this type of enquiry are necessary when the boundaries between phenomenon and context are not clearly evident, as is the case with this organisation. Pain Association Scotland (PAS) is a long standing (over 25 years) community based charity, which support people with long term health conditions such as Chronic Pain. In this regards, PAS provides 30 local self-management groups throughout Scotland for over 2000 people each year. This is a community-based service for people burdened with chronic painful conditions.

Context

The International Association for the Study of Pain defines chronic pain as 'pain without apparent biological value that has persisted beyond normal tissue healing time' (3 months). Many approaches to pain management have been short-sighted and access to specialist services remains low: only 3% of people in Scotland living with chronic pain currently use these (Breivik et al 2006). A study by Challis et. al (2010) indicated that self-management has the potential to improve health outcomes and in many cases, patients report increases in physical functioning. As a focus of organisational significance, PAS seek to help the significant numbers of people (18.1% Scottish Adult Population*) who suffer from the debilitating effects of chronic pain and studies specify that 25% of people diagnosed are unable to continue working as a result. In this regards, a recent study by PAS indicates that introducing and enabling sufferers to apply self-management strategies and coping

skills/techniques as early as possible in the treatment stream, makes a measurable difference to daily living (PAS 2014). A report published by PAS in 2014 explained that 42% of patients achieve benefits in terms of increased self-efficacy, 27% reduced depression, 22% reduced anxiety and 22% increased positive outlook (PAS 2014). In this context, PAS develops collaborative working relationships with all actors and stakeholders, based on a bio-psycho-social model and including a large skill mix of Health Care Professionals and the majority of Scottish Health Boards. From this informed perspective, PAS service objectives are focused on empowering people to use self-management capabilities and this is achieved through the delivery of self-management groups. These objectives are strategically supported by PAS to improve the quality of life, health and wellbeing for chronic pain sufferers. This approach also encompasses families, carers and colleagues as resources allow.

Business Structure

The organisation consists of an executive board with 5 board members. 1 Director, 2 admin staff, 1 Lead Trainer and 2 Training Officers.

Business Philosophy

Informed by this dual philosophical stance, Strand 1 incorporates a network of local self-management groups and Strand 2 incorporates intensive self-management courses for Health Boards delivered where there is no statutory Pain Management Programme (PMP).

Problem Statement

Although there is composite data sets available, PAS are unable to identify the amount of efficiency which underpins the currently managed network of specialised programmes.

Aim

To identify a robust evaluation mechanism which can be used by the management team .

Objectives

To identify appropriate historical data sets

To introduce a data collection method

To collect appropriate data

To develop a robust analysis infrastructure capable of underpinning efficacy measurement

LITERAL SIGNIFICANCE AND SCOPE

Underpinning much of the philosophy of PAS is the acknowledged failure in patient dissatisfaction (Coulter & Cleary 2001). In this regards, Grol et al (2000) notes that this is particularly relevant with a debilitating condition such as chronic pain. Sheridan et al (2004) further explain that the phenomena of shared decision-making looks to incorporate patients as an active partner with the person providing the intervention. Similarly, the GMC state that; "patients must be given sufficient information, in a way that they can understand, in order to enable them to exercise their right to make informed decisions about their care" (General Medical Council 1999). To accomplish a comprehensive foundation for analysis, a broad scope of literature was investigated and evaluated. However, this was not intended to be a meta-analysis of structural composite views of third sector organisation structures. It was however intended to draw upon significant themes of interpretation within the literal explanations of generally accepted practices of organisational daily business activity, based on knowledge equivalences. This primary construct allowed us to broadly consider what knowledge is, what does it consists of and where does it come from in the context of PAS. That is, the philosophical underpinnings for which the definitions attached to knowledge achieve justification for the organisation. The justification trajectory then expounds the following scope: what is the point at which knowledge exists and where does this justification come from. In this regards, Mitton, et.al (2007) focus primarily on knowledge transfer between users in the healthcare sector but exclude utilisation issues such as organisational learning, technology, aspects of personal and organisational culture. Analoui, Kakabadse & Karami (2006) further explain that any impact on business performance is mediated by decision-making speed, decision type, and strategy formulation. Blumentritt and Johnston (1999) support this argument by emphasising that the strategic potential of knowledge management can only be realised through directed practices at all operational levels within a business or organisation. That is, can knowledge be justified from a fundamental position of existence and what are the constituent parts, which make up this existence? Importantly, this allows for theoretical underpinnings, which give justification for the examination of something, which may not exist in a single observable form. Similarly,

relevant to PAS, something which in fact may become increasingly more complex if the consideration of personal perspectives becomes part of the synergy. Significantly, this allows fundamental critique of inter-relationships surrounding knowledge and knowledge transfer. This relationship cluster is therefore relative to formal business practices in specific detail. Similarly, progressional steps through current concepts and theories, used to support knowledge transfer practices in a business or organisational environment are used as a supporting mechanism for critique. This broad scope then allowed the pre requisite for critique to take place as an examination epistemic logic in its broadest sense and importantly, not simply in its axiomatic-deductive form. This dimension also allows knowledge definition to become a central tenet of knowledge transfer interpretation. To encompass this broad and complex phenomena, the theoretical paradigm consisted of the following sections. This sectioning enabled a composite interpretation to include both philosophical foundations and relative epistemic points of view. From the standpoint of knowledge transfer, structural components and new apparent concepts are discussed in relation to fundamental reciprocating theories, which use a combination or overlap of definitions to support them and allows for a measurable supporting mechanism to become apparent (Vygotsky, L.S. 1997). The following table highlights the determinate constituents which are used to define the POPC (Fascia 2015) precincts and considerations. In addition to this comprehensive structure, this planned approach is also informed by previous investigations by this researcher into knowledge transfer process and practices.

METHOD

Design:

The ontology of the study is based on a constructivist paradigm (Charmaz 2002; Berger & Luckmann, 1966; Croll 1986; Gbrich, 1999; Smith, et al.1999), with an overarching interpretivist method of qualitative data analysis informed by (Hillyard, 2010) and drawn from (Hollway & Jefferson 2000; Holloway & Todres 2003). To support this position, the establishment of a literature locus was based on the literal construct described previously. The design focus then adopted the four broad themes which were identified from the literature; Psychological, Organisational, Philosophical and Cultural. To strengthen this design, adoption of Creswell's (2009)

example of a script for a qualitative research questioning was used as a core driver. This allowed for any inter related complexity to be easily definable (Angrosino 2005). within the open ended interviews. For example: "How or what" is the "meaning of" the phenomenon and the phenomenology of the "knowledge-sharing patterns", for individual "participants". In relation to this, the study therefore adopted the following 'How' and 'What' aspects of the script and these where augmented to include 'Why' aspects to allow deeper exposure to interactive knowledge transfer experiences from the knowledge transfer practitioner's perspective.

HOW **do practitioners**	**WHAT** **practices supported**	**WHY** **are / is**
Define perspectives	Perspective definition	Perspectives important
Utilise methods of transfer	Knowledge transfer	Knowledge important
Define a framework	Business frameworks	Framework important
Determine governance	Governance implementation	Governance important
Associate knowledge with value	Business development	Development important
Define success	Business success	Success important

Table 1: *Source adapted from Fascia (2015)*

Data Collection

Due to the complex nature of the phenomena under investigation, the data collection consisted of a two-stage process.

Stage 1 allowed the flow of knowledge or knowledge transfer to be observed (Hillyard 2010) first hand, from a primary source to a secondary source via any intermediary knowledge transfer points. Direct observations, (e.g., human actions or a physical environment), Interviews (e.g., open-ended conversations with key participants), Archival records (e.g., student records), Documents (e.g., newspaper articles, letters and e-mails, reports). Participant-observation (e.g., being identified as a researcher but also filling a real-life role in the scene being studied) Physical artefacts (e.g., computer downloads of employees' work) (See Hollway & Jefferson 2000; Holloway & Todres 2003)

Stage 2 involved expert knowledge input from senior team members of the organisation, who validated the interpretation of the knowledge

transfer scenarios. There was a total of (N= 10) interviews, with each interview with each participant lasting approximately a half hour. There was an initial interview/ 1 follow up interview where possible to validate the interpretation. Transcribing of the interview was done immediately.

Data Analysis

Adopting informed views from (Frith & Gleeson 2004; Gbrich 1999) and Smith et. al 1999), regarding thematic logic, emergent themes were carefully unpacked in an iterative process. A multi-method analytic procedure was then adopted as a form of triangulation. The data were analysed to investigate underlying inference individual perspectives had on the qualitative answers relative to a POPC paradigm described earlier. The phenomenological properties of the interview data were also interpreted using classical thematic theory and item-response theory (Hayes 1997; Ritchie et. al 2003) and also incorporated element of Ritzers' 2007 contemporary sociological theory and elements of discourse psychology (Potter & Wetherell, 1987). In this sense, this form of thematic analysis was data-driven but interpretive in nature (See Boyatzis 1998; Hollway & Jefferson 2000; Holloway & Todres 2003). As previously discussed, it is apparent that whilst the understanding of complex association between entity analysis and knowledge transfer interaction is noted, to date there exists little in the way of literature to explain how both these entity states can exist simultaneously {as a singularity}. As such, this dichotic relationship remains transfixed within an organisational environment such as that which exists within pain association Scotland. In regards to this view, Elias (1978) argues that authority relations will inevitably form a central dimension (figuration) of interdependency ties, as 'structural relationships' (Elias, 1978, p. 74). Similarly, although studies by Cook & Brown (1999), do examine the useful collaboration of knowledge and social interaction, there is little evidence to draw upon which tests relationship synergy between figurational sociology (*figurations* ~ Elias, 1978) and complex knowledge transfer relationships or knowledge waves typically at work. Thus, proportional to decision-making processes underpinning the quantitative metrics. Utilised in this way, the ordered set of data categories (figurations) can reveal alternative, and importantly, historically unanswered ways in

which individuals understand, conceive and experience, particular aspects of knowledge within a specific environment {PAS} as a single phenomenon or entity. Importantly, the duality of this data collection method supports the extraction of holistic variation at an individual experience level relative to procedure points and at the same time, aligns the collective experience through a figurational lens overarched by a processual flow. The resultant thema is the combining hierarchical relationships (Elias 1978), between the participating actors, underpinned by the interactive relationship of experience and organisational ambivalence (unknown outcomes) but with an aspiration to reach the same desired outcome (See Elias 1956). Therefore, this dual alignment allows for the identification of multiple qualia or meanings attached to particular interactions (at process or procedure points), which importantly, would not be measurable if summary analysis were purely metric driven.

FINDINGS

In the context of an organisation, this paper would argue that when defining efficiency at an organisational level as studied within this research, it is not enough to simply categorise knowledge as a constituent of required business practice. Thus, to simply assign an entity which exclusively supports epistemic repute in the arena of success and competitive advantage is fundamentally flawed as it represents an intangible approach. Rather, it is the perceptual and memory retorts, related to subjective experience and a priori intuitions which play a pivotal role in any relationship to, and with, knowledge transfer and associated mechanistic evaluation. Wherein, it is the differentials within an epistemic proximal epoch (See Berger and Luckmann 1966), which define knowledge from a personal perspective. Wherein, it is the perspective ascendancies which become relevant in a business context from the knowledge transfer practitioners point of view and do not simply imply barriers to knowledge flow

Key Findings 1

In the case of Pain Association Scotland, POPC identified that influencing knowledge transfer classifications is the indeterminateness of human experiences between truth and falsehood, and precepts rendered to rationalistic thinking surrounding knowledge in the context of the organisation were difficult to

measure. Generated outcomes via a POPC methodology have eliminated internal discussion of idiographic (uniqueness of a particular situation/understanding/explanation) versus nomothetic (general laws/prediction/control), (See Cone, 1986) which currently overarch formation of care delivery plans delivered by this organisation. Simultaneously, this approach fulfilled a contextual gap associated with a duality of reference in analytical expressions currently adopted when discussing knowledge. This is because the output highlights perspectives from both an outsider (etic) and insider (emic) interpretation of organizational resource initiatives, and in doing so, will inevitably deduce any care delivery activity boundaries and parameters to be based on current resource capability.

Key Findings 2

Therefore, governance of interpretive discrepancy of decision making for this organisation is reduced to a cognisant understanding of facts and the critical evaluation of possibilities invoked by cognitive interpretation of user experiences, however, does not allow this to manifest as an epistemic object. Utilising POPC, allowed the organisation to identify the differences between participants attitude to care management as a single perspective and could then relate this to organisational resource as a conclusive entity. Thus, from the combined epistemological positions of organisation and culture, identifiable patient attributes interacted to and from a central organisational knowledge position, which directly related to the effectiveness of the knowledge transfer scenario encompassed within the intervention programmes. Thus, analysis using a POPC methodology can incorporate both causal relationships and intermediate experiences as a single strand of reference. This then allows a process structure to be interpreted which will show indicates/highlights categories of description (Process), corresponding to differing understandings or interpretation from interactive participants in the process, and any structures relationships which can establish between them to achieve a desired outcome. This combination of positions emerged as the point (Convergence point) at which knowledge transfer could be identified in terms of usefulness to the organisation and the patient. Further, knowledge interaction overlap at this convergence point can be understood to be where

knowledge transfer success and differentiation can be measured from and appropriate resource could be focused.

Key Findings 3

POPC utilised in this way allowed framework and structure resources related to knowledge to be interpreted differently, depending on the understanding of the actual essence of the knowledge within the transfer scenario. This interpretive dimension highlighted experience in the broadest sense for all participating actors as it included religious, mythical, aesthetic, perceptual, linguistic, and body experiences and importantly not singularly or enclosed to the individual's specific mental realm. Similarly, the scope of analysis encompassed leadership and decision-making processes amongst knowledge transfer practitioners, which highlighted how prescript and postscript knowledge is being intercepted and interpreted. This may be referred to as a {figurational} lens of analysis. In this way, interpretation of organisational resource based on knowledge transfer efficiency could be linked to Psycho-social, racial, ethnic and cultural deference's or contexts relevant to this organisation. By adopting this archetype under these informed views, allows this organisation to give definitive clarification of knowledge meaning, which asserts concentrating more intensely on the experiential conceptions by directing interpretation by the patient in a certain way. In doing so, encapsulate a technique which directs a new state of consciousness for the patient, and in which one can see, distinctly, the basic concepts used in the interpretation and transfer of knowledge simultaneously and relative to the original process or desired outcome. Finally, for this organisation, a POPC methodological alignment allows for the identification of multiple qualia or meanings attached to particular interactions (at process or procedure points), would not be measurable if summary analysis were purely metric driven.

RECOMMENDATIONS

Recommendation 1

Interpretation of a process overarched by a POPC analysis (etiologicical positioning) would allow this organisation to develop a strategy where normalised quantitative assessment can be augmented/supported and interpreted, depending on the perspective or modality of analysis. Thus could be developed from the

perspective of management efficiency, but importantly, could also include aspects of remedial interaction such as reactive indicators to a newly introduced initiative2.

Recommendation 2

POPC utilised in this way would allow the organisation to develop an ordered set of data categories which could reveal alternative, and importantly, historically unanswered ways in which individuals understand, conceive and experience particular aspects of programme delivery and within a specific environment, such as a single phenomena or entity individually related to service users. This dimension would therefore allow a more holistic variation at an individual experience level and at the same time, aligns the collective organisational experience to be overarched by a processual management flow.

Recommendation 3

The resultant thema which emerged from this study could allow the combining hierarchical relationships between the participating actors, to be underpinned by the interactive relationship of experience and organisational ambivalence to reach the same desired outcome. Resulting in a more favourable use of resources.

REFERENCES

Angrosino, M. (2005). Recontextualizing observation: Ethnography, pedagogy, and the prospects for a progressive political agenda. In N. Denzin & Y. Lincoln (Eds.), The Sage handbook of qualitative research (3rd ed., pp 729–745). Thousand Oaks, CA: Sage.

Argote, L.; Ingram, P. (2000). "Knowledge transfer: A Basis for Competitive Advantage in Firms". Organizational Behavior and Human Decision Processes 82 (1): 150–169

Bernstein, R. J. (1983). Beyond Objectivism and Relativism: Science, Hermeneutics, and Praxis. Philadelphia, PA: University of Pennsylvania Press.

Berger, P. L. and Luckmann, T(1966), The Social Construction of Reality: A Treatise in the Sociology of Knowledge, Garden City, NY:

Boblitz, M., & Thompson, J. M. (2005, October). Assessing the feasibility of developing centers of excellence: Six initial steps. Healthcare Financial Management,59, 72–84.

Charmaz, K. (2002). Qualitative interviewing and grounded theory analysis. In J. F. Gubrium & J. A. Holstein (Eds.), Handbook of Interview Research: Context & Method (p. . 675-694). Thousand Oaks, CA: Sage.

Cochrane Collaboration. Evidence-based health care and systematic reviews Retrieved 01 june 2014. http://www.cochrane.org/about-us/evidence-based-health-care

Cone, J. D. (1986). "Idiographic, nomothetic, and related perspectives in behavioral assessment." In: R. O. Nelson & S. C. Hayes (eds.): Conceptual foundations of behavioral assessment (pp. 111–128). New York: Guilford.

Croll, P. (1986) Systematic Classroom Observation, (see pages 84-93 on 'Observing in Classrooms').

Crilly, T., Jashapara A.,Ferlie E. (2010), "Research utilisation & knowledge mobilisation: A scoping review of the literature." Report for the National Co-ordinating Centre for NHS Service Delivery and Organisation R&D SDO, England (2010)

Denison, D. G. T.; Holmes, C. C.; Mallick, B. K.; Smith, A. F. M. (2002). Bayesian Methods for Nonlinear Classification and Regression. New York: John Wiley.

Dunning, E. (1992). Figurational sociology and the sociology of sport: Some concluding remarks. In E. Dunning & C. Rojek (Eds.), Sport and leisure in the civilizing process (pp. 221–284). Basingstoke: Macmillan.

Dweck, C. S., & Elliott, E. S. (1983). Achievement motivation. In E. M. Hetherington (Ed.), Socialization, personality, and social development. New York: Wiley

Elias, N. (1978). What is sociology? New York: Columbia University Press.

Elias, N. (1956). Problems of Involvement and Detachment. In: British Journal of Sociology. London, 7:226-52.

Fascia, M. (2015), "A unique investigation of knowledge transfer practices within the Muslim business community in Edinburgh." The international journal of management studies and economic systems; Volume 1 , issue 4 (Spring 2015)

Foucault, M. (1980). Power/knowledge: Selected interviews and other writings. New York: Pantheon.

Gbrich, C. (1999). Qualitative Research in Health. London: Sage.

Goodman, S. (1999). "Toward evidence-based medical statistics. 1: The P value fallacy" (PDF). Ann Intern Med 130 (12): 995–1004.

Hillyard, S. (2010) 'Ethnography's capacity to contribute to the cumulation of theory : a case study of differentiation-polarisation theory.', Oxford review of education., 36 (6). pp. 767-784.

Howick. J. (2011). The Philosophy of Evidence-based Medicine, John Wiley & Sons. p. 15.

Hollway, W., & Jefferson, T. (2000). Doing Qualitative Research Differently: Free Association, Narrative and the Interview Method. London: Sage.

Holloway, I., & Todres, L. (2003). The status of method: flexibility, consistency and coherence. Qualitative Research, Vol.3, No.3,pp 345-357.

Kilminster, R. (2004). From distance to detachment: Knowledge and self-knowledge in Elias's theory of involvement and detachment. In S. Loyal & S. Quilley (Eds.), The sociology of Norbert Elias (pp. 25–41). Cambridge: Cambridge University Press.

Klochko, V.Y. (2005). Self-organization in psychological systems (introduction into transspective analysis). Tomsk: Tomsk State University.

Kullback, S.; Leibler, R.A. (1951). "On Information and Sufficiency". Annals of Mathematical Statistics 22 (1): 79–86.

Lindberg, D.C (1992), " The beginnings of westerns science". Chicago Press Ltd. London

MacKay, D. (2003) Information theory, inference and learning algorithms, Cambridge University Press

Martin, J, P. (1976). "Variable Factor Supplies and the Heckscher-Ohlin-Samuelson Model". Economic Journal (The Economic Journal, Vol. 86, No. 344) 86 (344): 820–83

Marek, I and. Szyld, D (2000), Comparison theorems for the convergence factor of iterative methods for singular matrices, Linear Algebra Appl., 316 67-87.

Max Yaremchuk, Dmitri Nechaev, and Gleb Panteleev, 2009: A Method of Successive Corrections of the Control Subspace in the Reduced-Order Variational Data Assimilation*. Mon. Wea. Rev., 137, 2966–2978.

McAdam, R. and McCreedy, S. (1999). "A Critical Review of Knowledge Management Models." The Learning Organization. 6 (3): 91-100.

Mennell, S. (1998). Norbert Elias: An introduction. Oxford: Blackwell.

Mitton, C., Adair, C., McKensie, E., Patten, S. B., & Perry, B. W. (2007). Knowledge transfer and exchange: review and synthesis of the literature. Milbank Quarterly,85(4), 729:768.

Murphy et. al (2000). handbook of sports studies. london: sage. 92.

Murphy, P., Sheard, K., & Waddington, I. (2000). Figurational sociology and its application to sport. In J. Coakley & E. Dunning (Eds.), Handbook of sports studies (pp. 92–105). London: Sage.

Murray ,M.and Chamberlain,J. (eds) Qualitative health psychology, pp. 218–240. London: Sage

Ortega J.M. and Rheinboldt W, (1967), Monotone iterations for nonlinear equations with application to Gauss-Seidel methods, SIAM J. Numer. Anal., 4 (1967), 171-190.

Pedersen, L,. Borchgrevink, P., Breivik, H., (2014) A randomized, double-blind, double-dummy comparison of short- and long-acting dihydrocodeine in chronic non-malignant pain. Volume 155, Issue 5, pp 881-888

Pajares, F., & Johnson, M. (1996). 'Self efficacy beliefs and the writing performance of entering high school students'. Psychology in Schools, 33, 514-532.

Pieper, S. K. (2005, May/June). Reading the right signals: How to strategically manage with scorecards. Healthcare Executive, 20, 9–14.

Pintrich, P., & Schunk, D. (1996). Motivation in Education: Theory, Research & Applications.(Chapter 3.) Englewood Cliffs, New Jersey: Prentice-Hall.

Polanyi, M. (1966). The Tacit Dimension, Doubleday, New York, NY.

Polanyi, M., H. Prosch (1975). Meaning. Chicago: University of Chicago Press.

Potter, J., & Wetherell, M. (1987). Discourse and social psychology: Beyond attitudes and behaviour. London: Sage.

Puutio, R. (2009) Hidden Agendas. Situational tasks, discursive strategies and institutional practices in process consultation. Studies in Education, Psychology and Social Research No. 369, University of Jyväskylä,

Ritchie, J., Spencer, E. and O'Connor. W. (2003) ''Carrying Out Qualitative Analysis.'' In Qualitative Research Practice: A Guide for Social Science Students and Researchers, edited by J. Ritchie and J. Lewis, 219262. Thousand oaks, CA: Sage.

Ritzer, G. 2007. Contemporary Sociological Theory and Its Classical Roots, The Basics, Second Edition. New York, NY: McGraw Hill.

Robert, C.P., Cornuet, J. Marin J. and Pillai N.S. (2011). "Lack of confidence in approximate Bayesian computation model choice". Proceedings of the National Academy of Sciences 108 (37):

Roth, S., 2014. "Coining Societies: An Inter-functional Comparative Analysis of the Euro", Innovation: The European Journal of Social Sciences, online first.

Samuelson, Paul A., and William D. Nordhaus (2004). Economics. Ch. 1, "Figure 1-5. Investment for Future Consumption Requires Sacrificing Current Consumption."

Szulanski, G (1996). "Exploring internal stickiness: Impediments to the transfer of best practice within the firm". Strategic Management Journal 17: 27–43

Smith, J. A., Jarman, M. and Osborn, M.(1999). Doing interpretative phenomenological analysis. In

Thompson, J. M. (2007). Health services administration. In S. Chisolm (Ed.), Thehealth professions: Trends and opportunities in U.S.

health care (pp. 357–372).Sudbury, MA: Jones and Bartlett.

Vowles, K. Sowden, G. Ashworth, J. (2014) A Comprehensive Examination of the Model Underlying Acceptance and Commitment Therapy for Chronic Pain. Journal of Behavior Therapy, Volume 45, Issue 3, Pages 390-401

Vygotsky, L.S. (1997b). The historical meaning of the crisis in psychology: A methodological investigation (R. van der Veer, Trans.). In R.W. Reiber & J. Wollock (Eds.), The collected works of L.S. Vygotsky: Vol. 3. Problems of the theory and history of psychology (pp 233-343). New York: Plenum Press. (Original work written 1927)

Watkins, J M and Cooperrider, D. (2000*), 'Appreciative inquiry: a transformative paradigm', in Organizational Development Practitioner, volume 32, number 1, p. 6-12.

Whitney, H. (1957), Geometric Integration Theory, Princeton Mathematical Series 21, Princeton, NJ and London: Princeton University Press pp. XV+38