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The Trilogy of Science: Filling the Knowledge Management Gap with Knowledge Science and Theory

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Abstract

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by

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Dissertation Submitted in Partial Fulfillment

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Abstract

The international knowledge management field has different ways of investigating,
developing, believing, and studying knowledge management. Knowledge management
(KM) is distinguished deductively by know-how, and its intangible nature establishes
different approaches to KM concepts, practices, and developments. Exploratory research
and theoretical principles have formed functional intelligences from 1896 to 2013,
leading to a knowledge management knowledge science (KMKS) concept that derived a
grounded theory of knowledge activity (KAT). This study addressed the impact of
knowledge production problems on KM practice. The purpose of this qualitative meta-
analysis study was to fit KM practice within the framework of knowledge science (KS)
study. Themed questions and research variables focused on field mechanisms, operative
functions, principle theory, and relationships of KMKS. The action research used by
American practitioners has not established a formal structure for KS. The meta-data-
analysis examined 385 transdisciplinary peer-reviewed articles using social science,
service science, and systems science databases, with a selection of interdisciplinary
studies that had a practice-research-theory framework. Key attributes utilizing Boolean
limiters, words, phrases and publication dates, along with triangulation, language analysis
and coding through analytic software identified commonalities of the data under study.
Findings reflect that KM has not become a theoretically saturated field. KS as the
forensic science of KM creates a paradigm shift, causes social change that averts rapid
shifts in management direction and uncertainty, and connects KM philosophy and science
of knowledge. These findings have social change implications by informing the work of
managers and academics to generate a methodical applied science.

The Trilogy of Science: Filling the Knowledge Management Gap

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Dedication

To my Father William Thomas Bates, Sr. (deceased) who heartened my education

journey

To my Mother Clementine Bates-Warren who provided her love, encouragement, and

support

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Chapter 1: Introduction to the Study

Management and decision sciences are the products of social norms and institutional rules that determine and measure collective reasons for action. Knowledge management as a transdisciplinary field converges with applied professional field practice as shared belief. That field consists of knowledge from operation management, learning management, social science, language science, and decision science converging theories of decision, management, information, and organization. A beliefs, preferences and constraints (BPC) model in action research and choice reasoning show a gap in rational behavior where knowledge management and theory do not identify or engage readers as having a relevant applied practice of science. The shared belief that knowledge management (KM) practitioners have a relevant management and decision science stresses the importance of BPC modeled in action research, and the choice reasoning for this value-in-use research. Both mathematics and social research utilize and manage decision-making tools as related nonlinguistic decision science, which present an inference-based conception of rationality. Rationale equating rational behavior with behavior that maximizes expected utility is the canonical feature of decision theory and standardly developed by mathematicians, economists, and statisticians (Bermudez, 2009).

These applied profession interactions, framed as normative decision theory, generated a discussion of the dynamic knowledge-creation environment practices, and an argument that caused the split in the road between decision theory and the theory of rationality; a disjunction and negation on mathematical model rationality where knowledge or know-how and its intangible nature produced the development of decision sciences. Bermudez

(2009) first extreme view in effect claims the applicability of mathematics to the real world can all be met by mathematical models produced by decision theorists, statisticians, and so forth. Bermudez (2009) in contrast claimed as a second view, that mathematical models satisfy a set of demands fundamentally different from and alien to the normative and/or hermeneutic explanatory developments of philosophers, sociologists, and political scientists.

In this dissertation, I propose a third view and claim knowledge management practitioners as management philosophers must produce a generalized knowledge science to fill the gap between management and decision sciences, which may achieve the normative and hermeneutic explanatory demands. I analyzed management and decision science, which were neither devoid of argument or critical theory interpretation on how mathematical theory can be applied to the intangible world of knowledge and know-how. This research and analysis gave way to a knowledge science (KS) trilogy, and an objective limitation came to light natural and routine of the culture concept. Not all objective experience can be transformed or transferred into subjective states, which supports my claim that current management and decision science mathematical models do not satisfy fundamental and practical demands of management and its knowledge management efforts. A natural absorption process developed by culture—a normalization – is foregone or goes unrecorded. Knowledge of experiencing—the absorption of doing, and seeing being done – also goes unseen and unreported, yet still experienced. For example, the experience of living with a person cannot be transferred to another person subjectively through verbal characterization; this different experience is human characterization versus human interaction.

Deming's lecture, *A System of Profound Knowledge* (SoPK), involved a hypothetical inquiry in applied professional field practice incorporating "…the theory of variation, psychology, a theory of knowledge, and system theory, which involves insights into what organizations are, how they make decisions, and how they work the way they do" (as cited in Tabak, 2004, p. 164; see The W. Edward Deming Institute https://www.deming.org/). The probable decision-making model logic emerged in the early 15th century, which led to applied science practice, and scientific management professions. In the early 19th century, evolving theories and theorems on knowledge, learning, rational choice/behavioral, decision-making, utility, and political critical liberal democracy, built up a procedural knowledge foundation for decision theory (http://www.entovation.com/timeline/timeline.htm See Appendices A, B and C for complete proofs). Management practitioners are forced to discuss knowledge as a thing that can be managed, and decision theory optimizes rational choice procedures by structured human behavior and non-structured human thought processes and efforts, a language science capacity and standards imposed by decision theory as qualitative research and analysis norms of consistency. French (1986) defended decision theory as rational decision-making under uncertainty and assigned theorems relating to preference effect. A theorem underlies the existence and uniqueness of probability and utility function as numerical weights of ranking. When decision-makers observe axioms as self-evident truth, or logical and non-logical sense, utility functions are established. When decision-makers do not observe axioms, no utility function is established. Bermudez (2003) presented a standard propositional logic on inference-based conception of rationality whereas both linguistic and non-linguistic is understood in terms of three

propositional operators of disjunction, negation, and the material conditional. Practice derived experiences frames beliefs, social norms and expected utility as identifiable and clear-cut phenomenon and critical interpretation, which supports knowledge innovation for this knowledge science trilogy and foresight. Little and Ray (2005) argued that the theory or scheme of knowledge management and of knowledge-based organizations will differentiate from other fields such as information technology (IT) by the underlying differences and relationships developed in view of data, meaning, and practice. It is also necessary to acknowledge why the relationships between these types are complex rather than simple.

Background of the Problem

Decision science, a management science body of knowledge developed by systematized social science on how human behavior and human thought addresses action, has become a political mechanism. Political mechanisms have stifled decision science perspectives by appropriating scientific methods as being mathematical tools and models for predicted outcome information. Social science took advantage of technological advancements, developments and perspectives on human behavior and human thought processes, as well as adaptive and generative learning to innovate and create an applied science degree. Knowledge-worker routines were built into soft information programming in practice having teleological rules, standards, and judgments as the best goal use on information and decision tools which promoted power and political game. An emerging applied science serving to make higher-level theory more general or meta-theoretical as 21st century science education must support a social interactive nature of

knowledge. Churchman (1970) asserted that "Positivists have told us that we cannot derive the 'ought' from the 'is' " (p. 115).

Senge's (1990) five disciplines movement demonstrated service science with practical model theory building and interrelated actions and energies, if only through meaningful feedback loops of value created tools or circular feedback process is a canonical feature of knowledge practice. Tacit knowledge is fundamentally necessary when dealing with detail complexity at the subconscious level and as "...an aspect of mind that lies 'below' or 'behind' our normal conscious mental processes" (p. 365). The systems approach or systems thinking discipline intimately connected the human behavior domain science to knowledge management. Senge claimed that because the subconscious can be trained for significant interplay between conscious and subconscious, learning and practice can become automatic or natural; a critical interpretation developing knowledge and learning management (KLM) practices (pp. 364-367).

Dalkir (2005) developed knowledge management as a continuous cycle of three processes: (a) knowledge creation and capture, (b) knowledge sharing and dissemination, and (c) knowledge acquisition and application (pg. xiv). In this dissertation, I proposed a new fourth process in the community of practice (CoP) as a more coherent and applicative method. Knowledge science introduces an interdisciplinary hybrid science operating within applied management and decision science practices as an interdisciplinary trilogy of social science, service science and systems science (http://www.entovation.com/timeline/timeline.htm see Appendices A, B and C for complete proofs).

Denzin and Lincoln (2013) principally rooted drew on the act of decision-making and literature from psychology, economics, law, political science, philosophy, business, education, social humanistic disciplines, and decision science and demonstrated an interdisciplinarity of social science, service science, and information science using decision theory and theory of knowledge as a theoretical foundation. My meta-analysis research technique is described as an observed fieldwork within the field of management and analysis, which shapes decision science understanding only as a set of programmed managed tools, or utilities of technical processes. This widely accepted qualitative methodology communicated and contributed to the perspective that decision science sprang up from information science. Whether or not any substitute term will replace knowledge management, even if substantially more descriptive, is another matter. Srikantaiah and Koenig (2008) also discussed that the term knowledge management will be replaced by a more descriptive term, just as the term management information systems (MIS) was replaced by decision support systems.

Action research practitioners have ceased building knowledge management philosophy explicitly in the United States, so a gap exists in management research and has not given way to a KS theory or IT theory of knowledge management. Machlup (1962) claimed that "[t]heory formation is the creation of mental models and therefore essentially the result of invention, not of discovery" (p. 163).

Statement of the Problem

The international knowledge management (KM) field has perceivable different ways of investigating, developing, believing, and studying KM. KM is distinguished deductively by know-how, and its intangible nature set up different approaches to KM

concepts, practices and developments. Action research practitioners have ceased building

KM philosophy explicitly in the United States. An underlying shortcoming is that KM

has the least academic journalism on knowledge science, and does not identify, document

nor engage KM practice as having generalized relations to a science such as knowledge

science. American intellectual construct gave rise to paradigm shifts, inflection points,

taxonomy developments and multi-activity-level interactions, and discerned significant

transitions in intelligent focus tacitly interpreting a knowledge science. Native and

foreign investigator's constructs of knowledge science are inverse perspectives of the

American knowledge management system concept. Knowledge science (KS) is a novel

way to transform scholarly writing, transform knowledge management practice, and

publicly create capacity for new skills and capabilities; a social change where individuals

and institutions can operate with a better economic sense. Knowledge Management

(KM) professional practice explains, justifies, and qualifies how organizations operate in

the market and determine the decision science used to analyze and deploy resources. The

new found body of hybridization literature evidenced and provided good defense that

managerialism (a self-rationalized epilogue) has reshaped perceptions that quality

analysis and information, and clarity in decision-making comes by means of human

automation. This formidable perspective and behavior, if left unattended and

undisciplined, becomes unmanageable in an information scientist role and affects change

negatively; without the sense to step-back, ask questions, and reexamine whether

academic subject and practiced knowledge management thinking is the right one or way,

the frame of reference in logic becomes a cognitive bias that is the critical issue to avoid.

I claim homogenization is one feature whereat negation operates in American cultural

logic and power-relations, takes place when groups are philosophically or epistemically inferiorized and disregarded, and knowledge production concepts by these branded cultural groups goes untried. I affirm the importance of knowledge science (reengineered professionalization) is one of those critical issues that should be investigated. The transparency of what it is justifies knowledge being another kind of capital asset, and the evolving knowledge management (KM) practices such as KIBS – knowledge-intensive business services, eDiscovery, and other analytical realism used in applied science of industrial-organizational psychology, defend a full-scale literature review relating to the theme, theory, and argument toward an applied knowledge science (KS). Filling the gap between the reality and the theory, the theory and the practice, lead to the view that the KS gap is a knowledge production problem.

The problem is vagueness; given the knowledge of knowledge management knowledge science (KMKS) constructs, vagueness in current literature creates fuzzy logic that creates philosophical vagueness in meaning, principles, rules, application, and theory about the nature of KMKS. The problem actually stems from the marketplace (observed rational behavior); KM has rapidly risen in importance, and conventional managerial and consulting practices have flourished, while philosophical literature diminishes. For the most part, the applied profession work in ways that reflect our prior training and experience (dominant rational behavior), and the KM marketplace focuses on knowledge as a precursor to control. KM has created the strategic relationship between what the business knows (IT), which captures the sense of the knowledge production problem, and the lack of philosophical innovation. Knowledge management (KM) practitioners cannot get a clearer sense or perspective of KM if practitioners are not

differentiating the practice from other fields such as information science and decision science. Epistemicism is a knowledge production problem that affects KM practice development and transformation of expert knowledge, field authorities, regulations, rules, treatments, methods, principles, judgments and formal grounded theories (empirical law), and the sense of synthesis. Peer reviewed qualitative findings using epistemological and ontological constructs and independent study hypothesized that a knowledge science (KS) practical intelligence can be forged as an interdisciplinary and transdisciplinary study of knowledge (knowology). Knowledge management and knowledge science purpose is ultimately to know the value of intangibles (knowledge-based assets)—measurements of utility of information, value of utility function to business, and quantifying and qualifying courses of action.

Paradoxically, knowledge production toward a KS has simply failed (or been rejected) to define or formally structure KS. In spite of the non-nominalistic philosophy of language, the concept of KS is very much tacit in KM research, and makes explicit the need to confront and challenge contemporary practice toward advancing a particular context such as the knowledge management knowledge science nature and theorem. What field mechanisms make up KS; what operative functions make up KS; what is the principal theory of KS; what is the relationship of KS to the professional practice of KM? Dalkir (2005) defended a taxonomic approach to knowledge capture and codification as a critical issue of knowledge management and knowledge assets, and encouraged communities of practice to bridge the paradox of knowledge value. Furthermore, American KM practitioners have not identified or engaged as having a generalized relation to a knowledge science, which lends itself to rapid shifts in management

direction, uncertainty, and untrustworthiness of the knowledge management craft. Freireian pedagogies served as a reflection of values and philosophy and stimulant to knowledge management as a philosophy, and contributed to the growth of a more capable and rational freethinker in respective scholar-practitioner duties. Denzin and Lincoln (2013) confirmed that educators in respective scholar-practitioner communities cultivate and develop generative words and phrases as a brand for locally situated communities or focus groups.

Freire's (1968) activist agenda work and key generative phrases technique led to questioning and transforming material and social conditions. Participatory action research investigation revealed that the gap between management and decision science was knowledge science and its substantive theory. Filling the gaps between the reality and theory, and theory and the practice, leads to the view that the gap is a knowledge production problem; the lack of professional collaboration (knowledge sharing) and development is the main problem to effective transfer, and explicit change and transformation for a knowledge science. Thitithananon, Klaewthanong and Ratchathani (2007) identified that knowledge management (KM) in Thailand's education system does not follow a constant pattern, and implementing KM practices also varied by knowledge culture, knowledge infrastructure, information resources, and environmental and organizational behavior. The practical implication is that KM concepts, practices, and theories have become sustainable strategies for business exclusivity and restrictedness, and conventional managerial and consulting practice (Alvesson & Kärreman, 2001; Jennex, 2005; Little & Ray, 2005).

Research Questions

1. What field mechanisms make up knowledge science (KS)?

2. What operative functions make up KS?

3. What is the principal theory of KS?

4. What is the relationship of KS to the professional practice of KM?

These questions address the problem of vagueness and realize a clearer sense or perspective of KS is a necessary and novel way to transform scholarly writing, transform KM practice, and publicly create capacity for new skills and capabilities; a social change where individuals and institutions can operate with a better economic sense. Individuals whose immediate task at business schools is not training in the use of decision theory but research, in how to apply decision theory, in how to phrase questions concerning knowledge unknowns, will make it as easy as possible for decision makers to come as close as possible to expressing true judgments. Future theoretical perspectives will involve applied management and decision science practice of KS, which create social and cultural change for the individual researcher, academe, governments and the commercial marketplace.

Presentation of the Study

Knowledge management philosophy and methodology have been developing over several decades (http://www.entovation.com/timeline/timeline.htm See Appendices A, B and C for complete proofs), and fusion generally occurs at process interdependencies (automatic, detailed means) and people interactions (natural, dynamic experience); an extensive range of practical intelligence and actionable evidence that transformed people, process, and practice. Patterned behavior (balancing loop) and mental models

(reinforcing loop) frames feedback, and its fusion is where knowledge management philosophy and research thrive, and authenticate knowledge worker's turf.
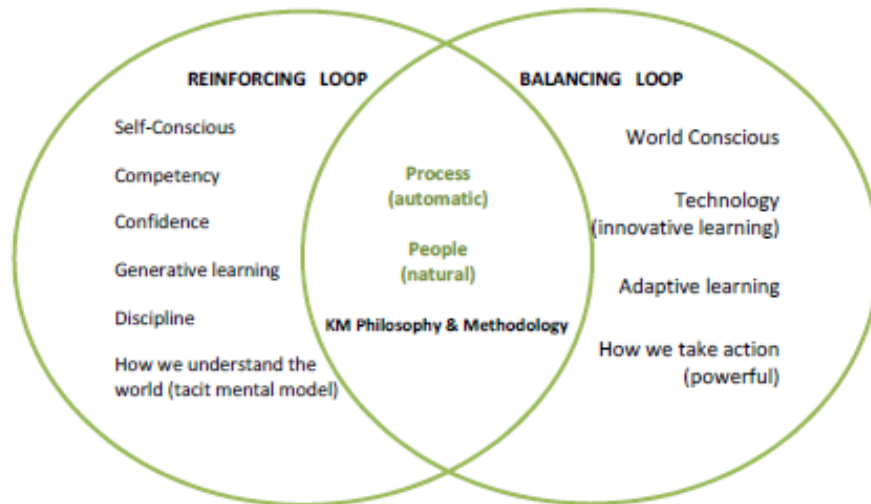
Figure 1. Key diagram of the knowledge management (KM) environment.

Practice derived evidence suggests that there is no way for the knowledge science (KS) fusion to be real and its deductions unreal. However, policy-makers and other business and public administration stakeholders also share interest and analysis of this KS trilogy; the varying degrees of desired confidence, and challenges that a knowledge science study could be safely undertaken infer contextual bias within the knowledge management field (dominant rational behavior).

Decision theories interpret an applied ethics of efficiency, a praxeology as to Hobbes's ethics rule (Kaufmann, 1968), and mathematicians as decision theorist's produced undecidability theorems as a core focus and origin of uncertainty and control

logic themes. Now those rational practices dominate in the field of information science and systems. Decision theory and its related sciences confirm that an interdisciplinary study drawing from literature and social and humanistic disciplines makes evident and affirms important qualitative interdependency (Boudreau & Ramstad, 2007). Machlup (1980) explained that producers of knowledge work may be transporters, transformers, processors, interpreters, or analyzers of messages, as well as original creators of knowledge work; great advances in technology and great shifts in demand lead to changes in the occupational composition of the labor force, yet leave the occupational structure of the economy unchanged.

The Machlup (1980) variables provided production possibilities of exploring and mapping knowledge, and accelerated knowledge management (KM) learning and field practice. Professional competence and lifelong learning are identified as two dynamics that play central roles in the prescription and description on decision making interactions, and the knowledge science concept:

1. Knowing-in-action, dynamic know-how that reveal intelligent action—knowledgeability.

2. Reflection-in-action, dynamics of critical thinking and function relative in measures of consciousness—comfortability
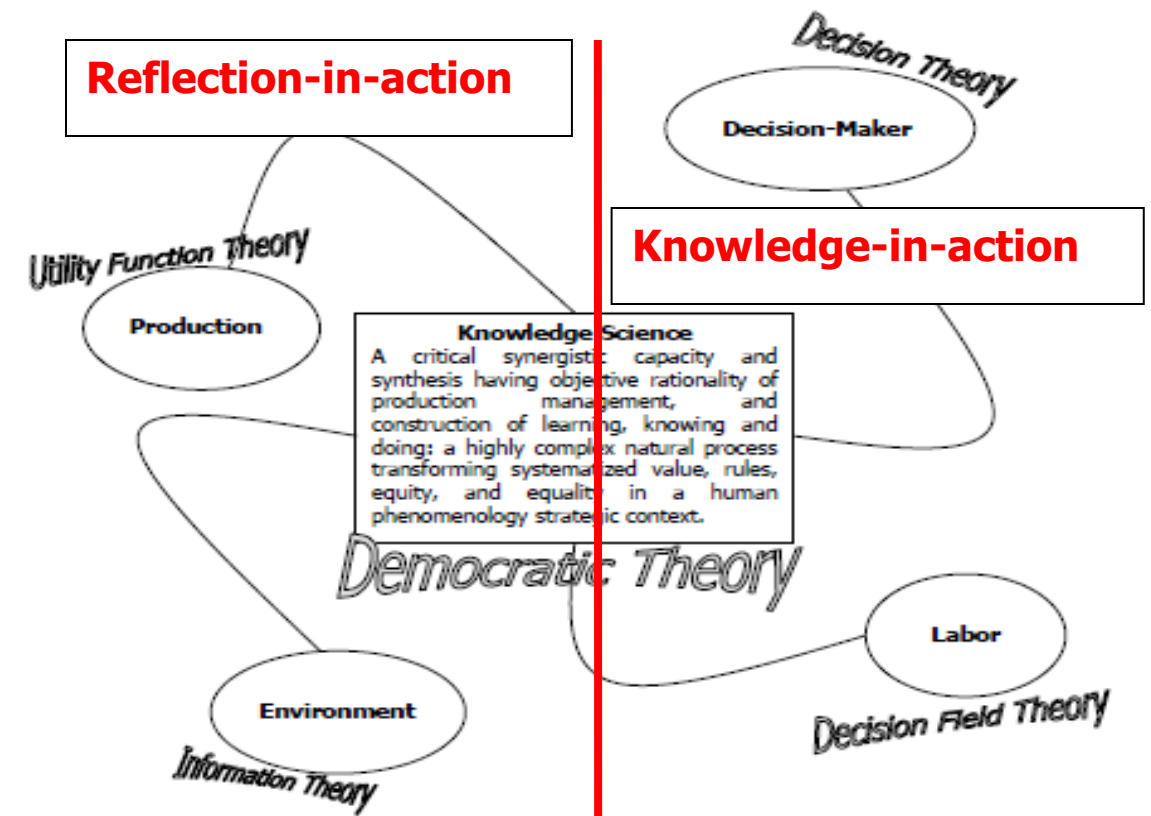
Figure 2. Human phenomenology context applied to the knowledge science construct.

Knowledge management related sciences as an epistemic interest gave meaning, value, and freedom about human phenomenology, and establishes four constructs of knowledge science—production, environment, decision-maker and labor, and four related theories—utility function theory, information theory, decision theory and decision field theory. A functional intelligence mapping and sets of cycles derived at different phases of research, illustrated a proof tree on applied management and decision science. Collectively these developments do not justify the claim of knowledge science to a specialty status within the field of applied management and decision science, yet serves as a paradox that perhaps allowed future researchers power to answer questions such as what is the average time to get from one cycle to the other; is the established order not significant or is the

established order significant; what is the average time in a cycle; are the illustrated

construct sequences, cycles, sets or cycles within just one cycle; is the unique integration

admissible constructs, which permit direct translations into generating functions?

Knowledge management and knowledge science (KMKS) purposes are ultimately

to know the values of intangibles—measurements of utility of information, value of

utility function to business, and quantifying and qualifying courses of action.

Bryer, Lebson, and Asbell (2011) explained and recognized pertinent provisions and key

language of statutes that control the valuation of intangibles also known as knowledge-

based assets by the Financial Accounting Standards Board (FASB). International

Financial Reporting Standards (IFRS) are the rules and guidelines created by the

International Accounting Standards Committee (IASC) and its successor, the

International Accounting Standards Board (IASB) (pp. 276-277). The facts and

reasoning of pivotal cases especially cases directly related to valuation of knowledge-

based assets provides the conceptual framework used as a measure of performance and

elements of a financial statement. These provisions are key areas whereas intangibles are

recognized as dynamics of reflection-in-action and knowledge-in-action.

The social role of knowledge is shifting and the standards of practice, the

standards for competence, and the standards for behavior are also changing. These

provisional changes shape the physical knowledge-based realities and activities, and help

ascertain proper scope and scale of knowledge-based assets.

- FASB ASC730 Research and Development

- FASB ASC350 Goodwill Asset and Other Intangible Costs

- FASB ASC805 Business Combinations

● FASB ASC820 Fair Value Measurements

● FASB ASC350-40 Accounting for Costs of Computer Software

● FASB ASC720 Accounting for Start-up costs

The U.S. Internal Revenue Service issued tax codes and final regulations on the treatments, rules, methods, principle, and theories regarding intangibles, also known as knowledge-based assets, by specific U.S. Department of Treasury legislation—Sections 197, 195, 248, 173 and 167. Knowledge is only one subset of information, inclusive to the use of the imagination and beliefs that are beyond knowledge. I claim the knowledge science (KS) trilogy shall play a central role in the prescription and description of scholarly literature. The United Nations Development Program (2010) claimed that knowledge management (KM) is about creating an environment in which people's experience and wisdom are valued, and where internal processes are structured to help people in creating, sharing and using their personal knowledge. *The Theory of a Knowledge Business* confirmed an important applied distinction between information and knowledge. Knowledge involves expertise. Achieving it involves time. Knowledge endures longer than information—sometimes forever. To be knowledgeable, to know a subject, is something different from and greater than knowing a fact or possessing a lot of information about something; therefore, what is information and what is knowledge depends on context. (Stewart, 2001)

Hybridization of knowledge assets involves preferences and collaborative arrangements, and confirms KM practices are varied by knowledge culture, knowledge infrastructure, information resources, and environmental and organizational behavior: knowledge as an economic transition to valuing the new reality of scaled experience

relates value-in-use to land, labor, capital, and learning capabilities, which shape new

forms of accounting and accountability. Information sharing and knowledge sharing as

the power of persuasion are valued rationality and generalization; both having three kinds

of value for learning: (a) sole value to you the owner, (b) business value as individualized

special knowledge or expertise (a right-to-work), and (c) transferable value.

Objectives of the Study

Knowledge management (KM) has known financial and non-financial valuation

measures in the discipline of business based on capital values, and the knowledge

economy. One straightforward method of defining the value of an object of information,

based on a service system concept, is the difference between information net worth and

the cost of acquisition. Knowledge is a collection of information transitioned in the

hands of an expert forming intelligence broad-based, wide-ranging, specialized-specific

to a given situation, knowledge of a truth, and a practice to mediate wisely. Human labor

is based on three generally accepted methods used for appraising the value of a trade

secret: (a) the market approach which compares the sales price of similar assets to the

assets being valued, (b) the cost approach which uses replacement costs as the indicated

value, and (c) the income approach which measures the value of anticipated future

economic benefits to be derived from the use of the asset in question. Knowledge-

intensive business services (KIBS) exclusive competence are packages of activities based

on critical information needs (CINS)—comprehension, application, analysis, synthesis,

evaluation and valuation, and on related embedded knowledge processes—production,

distribution, exchange, and consumption. The KIBS sector clarified the macro dynamic

knowledge commodification or knowledge stocks within the rational action research

model (ARM), consumer theory, and the activity-based cost (ABC) system concept of traceability. Peer reviewed qualitative findings using epistemological and ontological constructs develops knowledge management (KM) and the knowledge science (KS) trilogy as action research toward building and generating an applied management and decision science intelligence utility. Campbell and Groundwater-Smith (2010) claimed "the provenance of action research cannot be attributable to one clear source, but is best understood as hybrid, drawing on a range of philosophical positions and traditions" (p. xx).

Qualitative KM research produced plausible empirical findings for new KS perspectives; for example, Jennex (2005) presented case studies as action research examining the differences between countries on how KM was implemented. Jennex interpreted that the American KM field overwhelmingly accepts information science as the means to validate and make testable predictions of operations management, while on the other side, European, Chinese, Australian, Indian, German, and Finland purposely engaged in KM with different perspectives than Americans. Additionally, Zbigniew (2010) examined Knowledge Science (KS) at the Japan Advanced Institute of Science and Technology School of Knowledge Science (http://www.jaist.ac.jp/ks/en/aboutus.html) and described the epistemological limitations as a creative holism that lacked professional collaboration (knowledge sharing) and was the main problem to effective transfer, change and transformation of knowledge science (KS) fieldwork. JAIST School of Knowledge Science also claimed KS as a speculative interdisciplinary hybrid science whereas the knowledge and learning management structure of the individual, group, and academe integrated in the areas of humanities,

social science, cognitive science, information science, natural science and systems science. I argue and propose generating functions of knowledge science is a fusion and/or labelled product quality of social science, service science, and systems science; a knowledge management (KM) philosophy and transdisciplinarity, whereat all these arguments group with common interest.

I explored objective truth, generalized and explained knowledge science, introduced the concept of a substantive grounded theory, and shaped fact that a study having literary samples can prove and support realism as objective knowledge management systems (KMS) research.

Purpose of the Study

Knowledge management practitioners as management philosophers must produce a generalized knowledge science that will fill the gap between management and decision sciences. I characterized, generalized and explained the disjoint union or label product quality of knowledge science as a hybrid science for learning, knowing, and practice; explaining meta-knowledge production by qualitative meta-analysis. Philosophical vagueness or epistemicism creates knowledge production problems and fuzzy logic; the trilogy premise provides borderlines and eliminates the vagueness and fuzzy logic of knowledge science. Deng (2010), Griffiths, Koukpaki, and Martin (2010), Jifa (2010), Zbigniew (2010), Nakamori and Wierzbicki (2010), Pinker and Jackendoff (2009), Spohrer, Kwan, and Wang (Ed.). (2009), Hong (2008), Thitithananon, P., Klaewthanong, and Rajabhat, U.R. (2007), Al-hawari (2007), Pulvermüller (2003), and Madsen (1970) directed thinking towards qualitative methodology using language rather than mathematical calculations for analysis. Case study concepts discussed strengths,

weaknesses, and opportunities in the knowledge management (KM) field and confirmed
that a meta-data-analysis procedure using language can weigh fieldwork conditions for
KMS research and filled the proposed knowledge science (KS) gap between decision
science and management science.

KS is the basis and directed thinking toward a knowledge management
knowledge science (KMKS) study. The selected literature linking theory with practice as
background knowledge and pilot study sample, ultimately to quantify and qualify course
of action and purpose, excluded literature of the physical sciences. Theorists, theories,
and a models concept map demonstrate explored and examined literature review samples,
principles and areas of inquiry—social philosophy, administrative philosophy, KM as a
philosophy, learning theory, administrative theory, legal theory, technology, art as
management, and science as management.
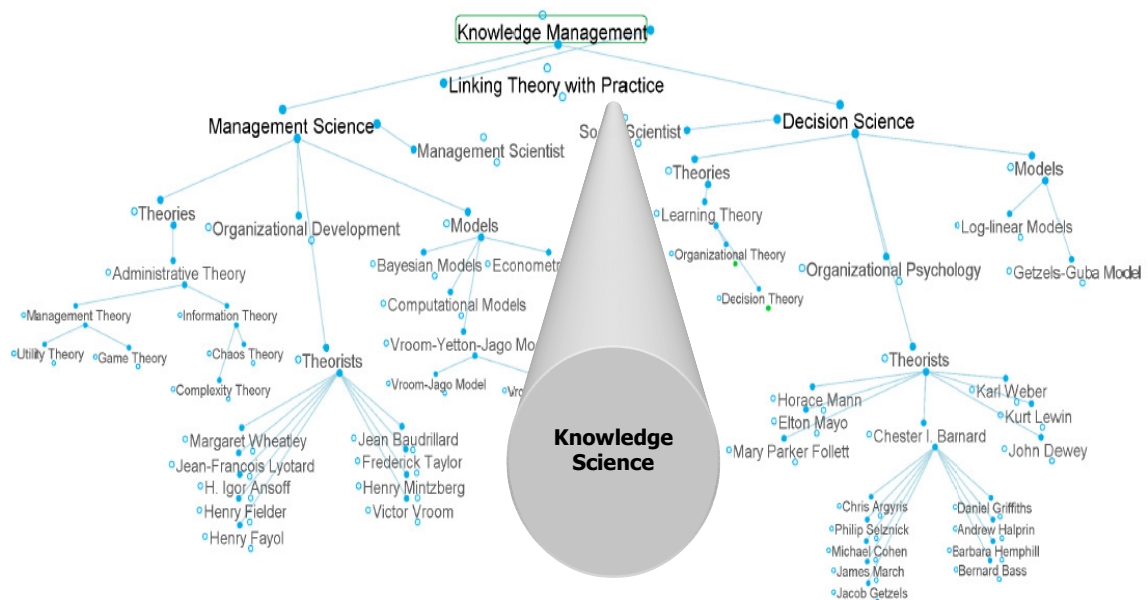
Figure 3. Filling the gap with knowledge science and theory.

Peer reviewed articles also characterized crisis events and declared the most commonly accepted and widely employed decision-making processes are behavior and rationality, as productive and redistributive methods that derive economic value. In this way, an understanding of knowledge science becomes relevant for future research and consultation on fusion, which shapes the decision sciences body of knowledge. American knowledge management practitioners have not contributed a substantive knowledge science (KS) theory based on a benchmark set of literature from social science, service science, and systems science, nor provided an adaptive and generative learning framework to innovate and create an applied science distinguished deductively by know-how and its intangible nature.   Decision sciences literature has created a gap or vacuum for a knowledge science prologue, whereat decision sciences philosophy and practice as science are abstract and null.

The research purpose was to fit knowledge management (KM) practice within the framework of knowledge science (KS) studies. A qualitative meta-analysis of social science, service science and systems science literature derived actual knowledge filling the gap, and answered research questions by linking findings to a KMKS substantive theory concept. I examined KS as an interdisciplinary body of knowledge having a practice-research-theory framework on a benchmark set of literature from social science, service science, and systems science, and undertook to characterize, generalize and explain the fusion or labelled product quality of knowledge science. KM practice is made real; drivers on learning the organization and how it deals with managing knowledge in the new economy. In Chapter 5, I discuss the knowledge management-

knowledge science (KMKS) investigation and how the concept can be applied in the field as

1. An entrepreneur science approach in support of intangibles management valuations

2. A competence initiative to strategic management research

3. A transdisciplinary skill that support corporate training needs as a consulting service; and

4. Curriculum tools to support competency in the areas of creative and critical thinking, problem-solving, technological literacy, global business education, leadership development, and career self-management

Need for the Study

The global business environment involve information transfer, market analysis, information tracking, digital technologies and the presumed need for speed on response logic; production functions that involve efficiency and estimation, and may add or detract responsibility, strategy, or style of tactics. The knowledge management or business intelligence practice that will support the global business environment, or reveal the path for the coming scholarly evolution must principally accept that

> the decision science cannot exist without the professional practice; the
>
> professional practice must, in fact, precede the decision science… Today the
>
> synergy between accounting and finance, or between sales and marketing, is so
>
> strong that it is easy to overlook how the decision sciences evolved from the
>
> professional practices and how they are both inextricably related yet distinct…
>
> (Boudreau & Ramstad, 2007, p. 16)

Exploratory research or the action research model does not identify engaging professional knowledge management (KM) practice as having the generalized relations to knowledge science (KS); this gap is an underlying problem in American academic journalism. Management applied research, an ampliative body of literature, led to managerialism rather than a study of knowledge because deductive control models set up practice based on past experience, rather than being built around the place of theory on well-developed areas such as strategy and organizational change management, intellectual property management, human resource management, financial management, innovation and management technology, management information systems, customer relations management, and supply chain management, and by a systems level means where technology is changing and shaping the value of information, influencing the perceptual or psychological level of decision makers, and bounding infrastructure to input/output generation.

Constructs of the Study

The constructs of the study are labor, environment, production and decision-maker, which are bound by an objective rationality of production management and the respective empirical laws. Decision science traditionally requires two academic intelligences–verbal/linguistic and logical/mathematical. A verbal/linguistic reasoner examines and triangulates data by using a meta-analysis technique.

Knowledge production as an applied management and decision science investigates and communicates production management as intelligence analyses. Knowledge science general functions on work, environment, and philosophy of personhood, like a mosaic or jigsaw puzzle, comes together when small pieces of

information are intact. Eventually, a clear picture of reality is observed. A conceptual and theoretical framework using a meta-analysis technique is formed by six phases— collection, conversion, fusion and form, transmission, valuation by tools, and techniques. Fundamentally, a comprehensive socio-cognitive process made of knowledge management application, analysis, synthesis, and evaluation; whereat criteria and experience apply to people, process, practice, and situations on which judgments are made.

Human labor power established a distinction between knowledge-*producing* workers and knowledge-*using* workers, which extended and expanded prototypical financial capital concepts of the applied profession. Rules and guidelines employed a principle that knowledge-*producers* contributed to knowledge transmission for an explicit purpose: "to create an impression on someone's mind" via consultation or as "original creators of communications of all sorts" (Machlup, 1962, pp. 382-383). Knowledge production is important, and its fulfillment on knowledge assets manifested in activities of human labor is relatively important to the overall knowledge management (KM) field contribution and performance. For practitioners, metrics are a way of learning what works and what do not. KM clarifies metrics as measures of key attributes yielding knowledge. Other normative value theory conceptions that can be used for further study and research could relate to social justice theory by rule of law and right (administered by justice). Can a science of public administration deliver the ends on public sector activities, in reality of New Public Management (NPM); is value theory by business markets or industries, as Chester I. Barnard's (1886-1961) organizational theory

of conceived cooperation, a rational choice or rational action of just institutions (fair, evenhanded, unbiased) arbitrarily reflecting merely different values?

Conceptual and Theoretical Framework

Research questions invariably occur while reviewing literary life, and empirically developed as new constructs or relationships establishing social change in the areas of management accounting, finance, valuation, knowledge management (KM), and claimed knowledge science by extending and developing prototypical phenomena and its intangible asset/intangible management nature. Exploratory research and theoretical principles have been considered and formed functional intelligences by a prolonged timeline of 1896 to 2013, as well as their related research development activities on intellectual property (IP), knowledge capital, social capital, human capital, structural capital, learning hypotheses, and learning practices on three levels—individual, group, and organizational.

KM has a foundational stakeholder theory conceptual approach. Value-creating activities and assessments of KM transforms from an old KM (1950 to 1975) providing a foundation of management and organizational theory on how the knowledge creation process works to a learner centric view of capability derived from learning. The new KM, second generation (1975 to 2010) provides complexity theory on how the knowledge creation process works the information centric belief of identifying, managing and sharing, derived from information assets. (http://www.entovation.com/timeline/timeline.htm see Appendices A, B and C for complete proofs) The idea and fundamental sampling criterion of these historical social facts framed purpose of using multidisciplinary literature and methodologies comprising

social science, service science and system science perspectives. I interpreted using triangulation technique how historical action research and case studies do support a qualitative meta-analysis.

Nature of the Study

In spite of the non-nominalistic philosophy of language, the concept of knowledge science (KS) is very much tacit, which causes a gap in knowledge management research, and facilitates the need to confront and challenge contemporary practice toward advancing a particular context such as the knowledge management knowledge science nature and theorem. What field mechanisms make up KS; what operative functions make up KS; what is the principal theory of KS; what is the relationship of KS to the professional practice of knowledge management?

Bermudez (2003, 2009) explained qualitative technique on data construction from the study of language and the senses of sentences. Bermudez (2003) denoted that propositional attitudes such as knowledge or belief have positive, negative, or no correlation, and established fact such that a meta-analysis having literary data can demonstrate analytic realism as scholarly qualitative research. The difference between power and authority are preludes to making of decisions; the question, whether you make decisions using power or authority generates the decision-making instrument.

Socio-economics indicated differentiators exist on knowledge diffusion, yet all try to explore, explain, and interpret the differentiation with current research approaches. New learning constructs supports a proposed generalization for a science of knowledge management (KMKS), and can prove that applied research approaches derives future standards for the study of knowledge. Decisions, management, and information are three

objective perspectives that devised a synergistic capacity or trilogy proffering systems, service, and socio-economics as three subjective sciences means to measuring knowledge, not just test curriculum and its applications.

Significance of the Study

Historical knowledge management literature and analyzed data proffered qualitative premises significant enough to realize research on the topic of knowledge management and KMKS is a novel way to transform scholarly writing, transform knowledge management practice, create social change, and modify curriculum and practical applications. Knowledge management (KM) practitioners are not theoretically saturated with knowledge science theory concepts, and to devise, extend or build apropos theory develops research knowledge as a social change benefit where individuals and institutions can generate a practical intelligence utility that can be repeatedly used as a rational expression on the concept of knowledge science. An entrepreneurial adjunct approach interpret knowledge management knowledge science (KMKS) as an advantageous and competitive platform for further study and development on intangible management, and advance important functions to home economics/domestic science.

Value practices of ethereal (intangible) management are based on social practice theory of labor value, cultural exchange, and service-dominant logic (Vargo & Lusch, 2008). The identification and comparability of competitive forces and value chains (Porter 1985) developed a practitioner's knowledge and understanding as qualitative relevance and faithful representation of fundamental, collective consumption. Intangibles are an increasingly important source of wealth creation and competitive intelligence. Konstantinou and Fincham (2010) interviewed knowledge workers who made clear that

knowledge sharing persisted in a framework of expected reciprocation (gifting), and set

forth the essence of social exchange. Information sharing and knowledge sharing are the

power of persuasion that involves preferences and collaborative arrangements, and

confirms knowledge management practices are varied by knowledge culture, knowledge

infrastructure, information resources, and feedback.

Four Power Players in Knowledge & Learning Management Projects

- Governing Board as Policy Makers (Political)
- Applied Professional as Expert/Emerging Authority (Scholar-Practitioner)
- Leadership as Administrative Management (Operational)
- Paraprofessional as knowledge workers (Operational Support)

Figure 4. Four power players in knowledge & learning Management

Konstantinou and Fincham (2010) demonstrated specific propositions and interpreted

comprehensible entanglements between ethnic culture and folkways (mores) within

generalizations on the nature of trade, and the normality reality that undermines the

perceived value of shared knowledge. Knowledge production is essential learning in

building practice, and confirms practitioners have a central role in the prescription and

description of professional competence. Knowledge products are also a realized

commodity of the social process, and clarified inseparable elements in natural value form

(physically being and/or physical qualities) and human labor power (universal function

that perform the same for all other commodities). The production possibilities of

exploring and mapping knowledge indicated the driving forces on dynamics of

production and, yielded and evolved a hybridization of knowledge assets and a

knowledge-based economy. Given the distinctive elements of feelings, structures of meaning, ways of life and struggle (forces), and balancing attributes accordingly, includes preferences and collaborative arrangements that operationalized ethnic (nation state/sovereign state) custom decision and value theories. When rhetorical perspectives were viewed subjectively as intangible benefits on macroeconomic production alternatives, knowledge as an economic transition to valuing the new reality of scaled knowledge, and relating value-in-use to land, labor, capital, and learning capabilities shaped competitive advantage by knowledge sharing.

In Chapter 2, I examine the peer reviewed literature that relates to knowledge science (KS) explicitly; because of the problem of vagueness, the literature has not derived succinct answers to research questions and sub questions. The KS conceptual framework has implications for advancing field knowledge and presenting a view of language analysis, while explaining meta-knowledge production by qualitative meta-analysis.

Definition of Terms

Abduction (Bryant & Charmaz, 2007) – consists of assembling or discovering, on the

basis of an interpretation of collected data for a new explanation: a logical form of

operation from a known quantity (=result) to two unknowns (=rule and case). Therefore,

a cerebral process, an intellectual act, a mental leap, that brings together things, which

one had never associated with one another: a cognitive logic of discovery

Applicability (Paterson, 2001) – "...refers to the consistency between the meta-study

conclusions and the domains within which the interpretations may have impact" (p. 52).

Capacity Enhancement (Morse, 1997) – "...in qualitative research means the process of

improving the capabilities of individuals and institutions to increase understanding of the

process and structures of... a self-sustaining environment for a critical mass of

transdisciplinary researchers that can replicate their capabilities in future generations" (p.

365).

Concept synthesis (Morse, 1997) – "...has been used to describe the process of

developing or clarifying a concept using qualitative methods" (p. 233).

Consistency (Paterson, 2001) – "...relates to the degree to which the conclusions follow

logically from the research processes and analytic steps" (p. 52).

Data (Paterson, 2001) – "The data in meta-data-analysis are obtained from the text or

primary research reports. Text may be one or two words or a sentence or a paragraph.

Claims of what primary researchers have revealed as findings are subject to the meta-

study researcher's personal filter" (p. 57).

Document Retrieval (Mirkin, 2011) – "a discipline developing algorithms and criteria

for query-based retrieval of as many relevant documents as possible, from a document

base, which is similar to establishing a classification rule in data analysis… (see Manning et al. 2008)" (p. 3).

Epistemicism (Restall, 2006) – vagueness as having no borderlines is a matter of knowledge – fuzzy logic

Explanatory Theory (Morse, 1997) – "Multiple concepts and constructs are linked to provide a comprehensive explanatory model of a complex phenomenon" (p. 182).

Formal Grounded Theory (FGT) (Bryant & Charmaz, 2007) – is the conjunctive result from examining and constructing theories or ideas across substantive areas yielding a formal theory, reality, truth in statements, or naturalistic generalizations

Managerialism (Wikipedia, The Free Encyclopedia, 2014) – in the economic sense, the application of managerial techniques in business; optimized by the application of generic management skills and theory (http://en.wikipedia.org/wiki/Managerialism)

Meta-data-analysis (Paterson, 2001) – "...is the analysis of 'processed data' from selected qualitative research studies to create a systematically developed, integrated body of knowledge about a specific phenomenon... is not a single technique but rather 'a flexible set of techniques' that can be adapted to the research question and to the information provided in primary research reports.... consists of (a) the study of the underlying assumptions of various data analysis procedures, (b) the comparison of different forms of data in terms of their quality and utility, and (c) the synthesis of research findings of various studies in a particular area of research. The first step in this process is to select a data analytic approach" (p. 55, 59).

Neutrality (Paterson, 2001) – "...refers to the freedom from bias in the process and outcome of the meta-study" (p. 52).

Personal Fusion (Daft, 1998) – "…Personal Fusion = Knowledge$_{E,1}$ x Will x Action….
Two types of *knowledge* are needed. The first kind, external knowledge, is knowledge
about the subtle force obtained from the outside world…. The second kind of knowledge
is internal… In seeking internal knowledge of mindfulness, you must come to understand
your own frame of reference, your assumptions about life, the outline of the stone well in
which you live. Internal knowledge is not available in books, nor can it be cultivated
during a hectic work schedule. It is derived from reflection, contemplation, meditation,
and feedback from close associates, through all of which you gain access to your
essential self, your own inner feelings" (p. 63).

Praxeology (Kaufman, 1968) – "…to acquire the basic principles of a new science which
has been created for him…" (p. 12).

Qualitative meta-analysis (Morse, 1997) – "...a way of knowing-what-we-know and
further extending findings" (p. 312).

Substantive Grounded Theory (SGT) (Bryant & Charmaz, 2007) – is a conceptual
level on theories or ideas having important general implications and relevance, and
become the springboard or stepping stone to the development of a FGT

Text Analysis (Mirkin, 2011) – "a set of techniques and approaches for the analysis of
unstructured text documents such as establishing similarity between texts, text
categorization, deriving synopses and abstracts, etc (Weiss et al. 2005)."

Theory (Creswell, 2009) -- "...is an interrelated set of constructs (or variables) formed
into propositions, or hypotheses, that specify the relationship among variables (typically
in terms of magnitude or direction). A theory might appear in a research study as an
argument, a discussion, or a rationale, and it helps to explain (or predict) phenomena that

occur in the world. Labovitz and Hagedorn (1971) add to this definition the idea of a *theoretical rationale*, which they define as 'specifying how and why the variables and relational statements are interrelated' (p. 17)" (p. 51).

Theory-based insights (Repko, 2012) – "...are insights informed by or advancing a particular theory or theoretical perspective.... Because disciplinary insights are largely expressed in language, conflicts in insights may involve embedded terminology or concepts" (pp. 296-297).

Theory Map (Repko, 2012) – "...describes the theory's supporting evidence, importance, and similarity or competition to other theories" (p. 152).

Transferability (Morse, 1997) – Guba (1981) "...recast the notion of generalizability by using the ordinary language term transferability.... ...application or transfer of knowledge can occur across settings when one knows a great deal about both the transferring context and the receiving context. The transfer of knowledge is facilitated by what Geertz (1973) referred to as 'thick description."

Truth Value (Paterson, 2001) – "The *truth value* of a meta-study lies in the faithfulness of the researcher in presenting data that resides in the primary research reports, rather than in the prior conceptions of the researcher (Sandelowski, 1986)" (p. 51).

Chapter 2: Literature Review

Introduction

Literature has translated value into observable criteria, gave greater authority on theory and management, and showed the disciplinary perspectives on important work done in the field of knowledge management and the applied professions. A literature review search has identified only relevant disciplinary insights and theories offered predominantly as major factors that gave rise to the positive or negative nature of knowledge science under specific conditions. Whether these conditions or situations are empirical to practice will be determined. Generally, when a construct has been discussed infrequently in the earlier literature, as knowledge science has been in American practitioner knowledge production and literature; hypotheses and constructs of interest are derived, and problems and questions are sought to confront and challenge the contemporary practice toward advancing a particular context such as the knowledge management knowledge science (KMKS) nature and theorem. Accordingly, literature review search activities should not be considered a full-scale literature search toward collecting data or answering research questions, but identifying potentially relevant literature that gave rise to the nature of a knowledge science inquiry. Historical literature revealed knowledge management is transcending and crossing disciplines and domains of knowledge and application, and research methodologies generated relevant questions, arguments, debates, forms of analyses, and practice derived evidence (PracDE), which associate knowledge management practice to a knowledge science (KMKS). I analyzed and compared peer-reviewed literature perspectives on theory and management, interdisciplinarity, transdisciplinarity, domains of knowledge and applications, system

dynamics and methodologies, and the most important finding revealed that knowledge management and knowledge science (KMKS) had limited discussion or argument on a KMKS theorem. Further, practiced derived evidence (PracDE) emerged in narrative data with a healthy skepticism that the system's goal must be to improve practice by creating a measurement system that actually works, provide useful training to practitioners, and link KMKS activities beyond business impact or return on investment (ROI), to an intangible management context (Al-hawari, 2007; Baets, 2005; Boudreau & Ramstad, 2007; Busemeyer et al., 2010; Corburn, 2005; Daskin, 2011; Deng, 2010; Ermine, 2010; Firestone & McElroy, 2003; Griffiths, Koukpaki & Martin, 2010; Nakamori & Wierzbiki, 2010; Spohrer & Maglio, in-press; Thitithananon et al., 2007; Wilson & Boras, 2002; Wright, 1992; Zbigniew, 2010). This KMKS nature and theorem is practice derived evidence (PracDE) educed and examined in applied management and decision science (AMDS) research areas using related historical data, translating value into observable criteria, and showing an interdisciplinary perspective on knowledge intensive business (KIB) practice.

- Organizational psychology view on KM

- Decision science conceptual theoretical view on Knowledge   Management

- Management accounting view on knowledge, and related intangible valuation

- Knowledge management view on science and practice

Literature review research methods generally were qualitative and mixed method case studies that addressed important practiced derived theory (PracDT), principles, empirical findings, epistemological investigations, and competing theoretical arguments;

I explored meta-science, meta-synthesis, meta-analysis, meta-language techniques, and other field work contributions which generated relevant questions on what ought to be done (Ermine, 2010; Edvinsson, 2010; Griffiths et al., 2010; Jifa, 2010). Human concept learning is an associative learning value of labor, and a necessary knowledge transfer process relevant in decision science research as concept mapping. The relevant focal point is how new lenses and arguments contributed to a knowledge management (KM) socio-cognitive process, comprehension, application, analysis, synthesis, and evaluation. Decision science research detailed primary measures of cognitive performance as choice, decision time and confidence, which advanced and built upon a learning management (KLM) conceptual model composed of six phases—collection, conversion, fusion and form, transmission, and valuation.

Critical Discourse Analysis

The *International Journal of Knowledge and Systems Science* offered learnings on knowledge management systems, knowledge science, and dynamic modeling of human knowledge processes from a mathematical, practitioner, student, and field specialists understanding. The journal shared a philosophical, technical, social, and psychological framework for professional collaboration between knowledge science (KS), knowledge management and philosophy, which gave the published research strength in a practice context, and served to justify the need for practice derived theory (PracDT). Equally important, is that government regulation has created such a perspective change in the field of knowledge management (KM), the journal literature concepts relating to the relationship of and between practical managerialism and literature, advocated and validated the central belief of hybridization. Hybridization as a trilogy on social science,

service science, and systems science inspire theoretically, and supported and strengthened the literature examination on dissertation research questions. The literature also indicates the researcher as a good instrument, and concluded that a qualitative methodology as meta-data-analysis on knowledge science is good research. Jifa (2010) and Zbigniew (2010) explored meta-synthesis from a trilogy perspective on science and systems strengthening the fact that synthesis of qualitative research should be interpretative, rather than aggregative generating predictive theories, and should facilitate a fuller understanding by context and culture. Knowology relevance facilitates and comprises culturally by American, European, Spanish, Portuguese, Hungarian, Asian, Iranian, Australian, African, Brazilian, Canadian, Dutch, Swedish, German and Finnish. Zbigniew (2010) defended broadening the hermeneutical horizon and principles of knowledge science (KS), knowledge management and philosophy; asking if, KS and ST (systems thinking) are pluralistic, then why are these other views absent from considerations?

> The usual horizon of knowledge science is limited to nominalism, empiricism, and naturalistic and evolutionary epistemologies. I propose to broaden this horizon by applying some other philosophical attitudes, such as a non-nominalistic philosophy of language... A need also exists for a professional collaboration between knowledge science, knowledge management and philosophy. (p. 43)

The new found body of hybridization literature evidenced and provided good defense that managerialism has reshaped perceptions of what constitutes critical issues, and I affirm the importance of knowledge science (reengineered professionalization) is one of those

critical issues that should be investigated. The transparency of what it is, the increases of

activity-based costing (ABC System) require firms to produce a particular type of data

related to valuation. Valuation concepts justifies knowledge being another kind of capital

asset, and the evolving knowledge management (KM) practices such as KIBS –

Knowledge-Intensive Business Services, eDiscovery, and other analytical realism used in

applied science of industrial-organizational psychology, defends a full-scale literature

review relating to the theme, theory, and argument toward an applied knowledge science

(KS).

Table1.
Field Notes Construct of a Triadic Research Relationship

Category/Code	Topic	Project	Notes
Social Philosophy (Philosophy of Physics & Ethics)	Decision Science (Apodeitic Imperative) aka Imperative of morality		
Administrative Philosophy (Philosophy of Logic)	Management Science (Problematic & Assertoric Imperatives) aka Technical imperative or imperative of skill		
Knowledge Management Philosophy	Language Science	Multiple Intelligences	
Learning Theory	Decision Theory	Political/Critical Theory	
Learning Theory	Decision Field Theory (DFT)		
Learning Theory	Organizational Theory	Behavorial/Rational Choice Theory	
Administrative Theory	Management Theory	Utility/Game Theory	
Administrative Theory	Information Theory	Complexity/Chaos Theory	
Administrative Theory	Probability Theory		
Law	Human Relations Movement		
Technology	Learner Centric (Explicit)		
Technology	Information Centric (Tacit)		
Art as Management	Social Science	Reasoning (nonlinguistic)	
Science as Management	Service Science	Decision-Making	Practical Implications vs. Production Davenport & Prusak (1998) remarks on **Enablers** to business process and drivers for KM platform
Philosophical Change	By Values		
Philosophical Change	By Theory		
Philosophical Change	By Institutional Oversight		
Philosophical Change	Of Traditional legacy		

Note. Table provides a triadic relationship view in evidence between the writer – data – literatures, as analytical realism on relevant concepts to knowledge science

Social change, as how does questions and conditions leading to change, create capacity for change in practice (new skills or capabilities) and operation capability. Changes in process and investigation (examination and exploration) changes performance; changes in performance results in benefits and outcomes that change business and/or academic performance; therein, creating publicly, social change. This approach reassert interfacing and interacting, and affirms the five principles of service phenomenology: (a) competent service evolves, (b) service development is improvable, (c) service application is strategic, (d) service improvement is learnable, and (e) service

operation is a form of social capital (Koumpis, 2009; Maglio, Kieliszewski & Spohrer 2010; Spohrer, Kwan & Wang, 2009; Xiong, 2012). Being a socially conscious consumer and sole proprietor/practitioner (PracDE) means I am more than likely to engage in social change centered on social justice or protecting the environment. Supporting companies that behaves responsibly (social performance model) toward people and the environment, and promoting and educating others about my favorite causes are also companies I am more likely to engage as an agent of social change. Managerialism influenced socio-economics, inferring that the economy of service or service engineering in view of economics strengthens a holistic design and management approach to knowledge science. An approach I coined, *The Trilogy of Science* plausibly as a hybridization of social science, service science, and systems science.

Service industries are intangible activities carried out on the customer's behalf or any act or performance that one party can offer to another that is essentially intangible and does not result in the ownership of anything. Intangible activities are goods belonging to some economic unit, which is brought about as the result of the activity of some other economic system and its economic activities that produce time, place, form, or psychological utilities. The concept of service and science is proposed as service systems and how to understand their evolution; management is proposed on how to invest to improve service systems; engineering is proposed on how to invest new technologies that improve the scaling of service by the application of competencies (such as knowledge and skills) and practice derived theories (PracDT) (Xiong, et al, 2012). Service characterized the scientific view influencing methodology in chapter three, and how we perhaps should perceive knowledge science. Knowledge science can provide the

applied professions the capacity, capabilities and stabilizing benefits necessary for a holistic service design and management.

International Journal of Information Systems in the Service Sector offered learnings on an emerging service sector discipline framing future service science research for Practitioners and Researchers. The journal's strength is it brings together service platforms for academic research as interwoven packages on communication, information, and knowledge. The reviewed articles brought a fundamental capability toward diffusion and dynamic processes as *value-cocreation mechanisms* of quantifiable growth; service science, management, engineering, and design (SSMED) is knowledge-intensive on customer-provider interactions in relation to computational resources (computer science), which are governed by the laws of logic-and-mathematics (Spohrer, Kwan, & Wang, 2009; Spohrer & Maglio, 2008). SSMED is a normative perspective reflecting driving forces on controlled results and life cycle interaction; however, a weakness since rationalized service involved a formal and informal hybrid nature of artificial science (man-machine systems concept), which aforementioned cause difficulties of disentangling prescription from description.

International Journal of Knowledge and Systems Science offered learnings on knowledge management systems, knowledge science, and dynamic modeling of human knowledge processes from a mathematical, practitioner, student, and field specialist understandings. The journal's strength is it confirmed the shared concept of professional collaboration between knowledge science (KS), knowledge management and philosophy; offered learnings on basic theory of meta-synthesis, as illustrated in dynamic KS models; supported and showed that the shared context was an interdisciplinary perspective of

philosophical, technical, social, and psychological process. The selected articles

defended broadening hermeneutical horizon and principles on KS, and established the

evolution and new model challenges in the field of knowledge management towards this

new episteme. Paradoxically, peer reviewed articles thus far have simply failed or

rejected to define or formally structure a knowledge science principally by operational

explicit dimensions; in spite of the non-nominalistic philosophy of language, the concept

of Knowledge Science is very much tacit (Edvinsson, 2010; Geisler & Nilmini, 2009;

Griffiths, Koukpaki & Martin, 2010; Jifa, 2010; Zbigniew, 2010).

     Psychological Review offered contributions and progress made in the area of

experimental psychology and decision field theory evaluations and commentary.

Decision field theory is a psychological theory developed to use complex real-life

decision making under uncertainty, as a common foundation for predictive distributives

of choice probability and response times; these two variables are often observed as the

speed-accuracy trade-off relationship (Busemeyer, Hotaling & Li, 2010; Busemeyer &

Pleskac, 2010; Busemeyer et al, 2009; Busemeyer & Townsend, 1993; Slovic, Fischhoff

& Lichtenstein, 1977). An unavoidable fact about human decision making is that

decisions take time; decision time is inversely related to the deliberation time and

influences of choice probability, which accounts for the statistically significant

interaction effects implied by the regret ratio model on indifference.

Decision field theory (DFT) is an integration of subjective expected utility theory (SEU)

entailing an ability to perform more than two-alternative (paired) comparison analyses.

The cognitive models uses decision-making under uncertainty, decision time, preference

reversals between choice and prices, context results, confidence, and the linear rule-based

response as maximum-likelihood values that produce continuous output responses, from constant input values indicating an interpretative function, as accordant people's internal beliefs and reality (soft service) (Busemyer & Pleskac, 2010).

Griffiths, Koukpaki and Martin (2010) examined action research approaches as an evidence-based meta-analysis of 287 pieces of academic and knowledge management (KM) practitioners' models and frameworks (71 in all) in attempts to create a knowledge management model having theory of change model as a common framework that bind the psychological process to situated settings. The findings demonstrated that a common framework of KM consisted of 16 common critical success factors (CSFs); four functions of knowledge management and twelve enablers, which exposed a potential gap, in view of the fact that zero (0) models or frameworks examined in the meta-analysis, identified all 16 CFSs (remarked as "governing variables" of "TheKnowledgeCoreModel"). Further, integration on the findings made apparent, of the remaining 53 models examined, 51 (96%) employed KM solutions on a systems view of the world, while the remaining 2 (4%) used an analytical view; suggesting knowledge science (KS) can be the know what of knowledge management literature. "We emphasize this in our original research, where of the 71 models interrogated, only an average of 10 CSFs were identified per model. We suggest that this demonstrates a lack of 'know what' in literature, which impacts the performance of models in delivering 'know how' " (p. 7). Research background and theoretical principles addresses practitioners, academics, and theorists (member checking survey) dissatisfaction with knowledge management's nature being as a strategic management tool. Griffiths, Koukpaki & Martin (2010) presented purposeful arguments for and against new model building in debate of "real situation and

desirable changes to it.... This would seem to offer some potential resolution of the political issues associated with change..." (p. 4). The journal strength is it connected the variable of human labor and behavioral decision theory to field practices by Griffiths, Koukpaki and Martin (2010) and Slovic, Fischhoff and Lichtenstein (1977) narrative data and their use of meta-analysis. "TheKnowledgeCoreModel" described as part of the grounded theory paradigm, investigated and integrated findings, which made apparent that the dominant views of knowledge creators within the knowledge management (KM) field were managed-information systems-thinking perspectives. Griffiths, Koukpaki and Martin (2010) findings declared KM discipline is an interdisciplinarity of business and management, engineering, decision science, computer science, medicine and health, and social science purposes, "TheKnowledgeCoreModel". Most importantly, the meta-analysis result reflects on the *autopoietic relationship* between knowledge management (KM) and the processes as being of an organizational or institutional macro and micro learning environment. "TheKnowledgeCoreModel" also identified that interdisciplinary methodology coupled with knowledge as a socially and culturally bound construct indicated their research best fit the action research model (AR).

The *International Journal of Knowledge Management* offered reviews and directions toward future field research. The journal strength is it validated future research on both interactive and integrative knowledge management systems (KMS) as comparative studies. Kankanhalli, Tan, and Jennex (2005) investigated knowledge management (KM) metrics research in practice from 1996 to 2002 (http://www.entovation.com/timeline/timeline.htm See Appendices A, B and C for complete proofs) on practical articles that have proposed and tested metrics for

evaluation, and user's value-in-use or use-value. Most literature samples were drawn

from one organization or one online forum, and identified limited research studies on

usability and usage of knowledge management systems (KMSs) as an indicator of user

acceptance. Projects were examined based on the nature of software development, new

product development, process improvement, and the performance criteria (knowledge

process exampled by sharing and creation). "Additionally, there is a gap between the

micro-level assessment studies (user and system level) and the macro-level assessment

studies (organizational level)" (p. 28). Metrics provided a basis for empirical validation

of theories and relationships between concepts; one limitation and weakness was the lack

of knowledge management (KM) operational standards lead to proliferation of rules, and

difficulty in interpreting comparisons. Kankanhalli, Tan, and Jennex (2005) showed KM

practitioner's responded on a survey that intellectual capital (IC) metrics should be stored

and reported whether as an internal management tool both administrative and operational,

or for external communication (e.g., brand, customer, and supplier relations); such

metrics would prove value-in-use or use-value. "The overall IC measure is a

multiplication of I and C" (p. 24). Kankanhalli, Tan, and Jennex (2005) used IEEE

standard glossary of software engineering to distinguish between what is a measurement

and metric and clarified metrics as measures of key attributes yielding information. For

practitioners, metrics are a way of learning what works and what do not. "KM metrics

are particularly distinct from other metrics due to the intangible nature of the knowledge

resource (Glazer, 1998)" (p. 21). In addition, Kankanhalli, Tan, and Jennex (2005)

presented metrics on electronic community of practices (COPs), which help to infer and

generalize end-user commonalities (standards) and differences. The qualitative

techniques and viable mixed-methods reviewed involves extensive time developing

numerical scale indicators on users' value-in-use or use-value. Abstraction and

interpretation are fundamental aspects to engaging design science or applied science

making significant the process of strategy mapping.

Bermudez (2003 & 2009) provided qualitative technique on data construction

from the study of language (the senses of sentences) denoting that propositional attitudes

such as knowledge or belief have positive, negative, or no correlation, and that a meta-

analysis having literary samples can demonstrate analytic realism as a qualitative

technique by sequences of characters, patterns in data, and language in data, which lead

to the discoveries that you can make outside the governed laws of logic-and-mathematics

(empirical laws).

I reviewed qualitative case studies and presented practice derived evidence

(PracDE) as narrative data understandings on knowledge transfer processes and

associative learning models, strategy mapping and mining techniques, value creating

systems and platforms, and language analysis that reinforce the usefulness of training

practitioner's in field research, because knowledge is produced by trained disciplinary

scholars. Relevant disciplines identified, explored, and considered were based on

advancing applied knowledge and decision science field expertise. Chapter three meta-

analyses considered knowledge science (KS) as an interdisciplinary body of knowledge

having a practice-research-theory framework, and undertaken to characterize, generalize

and define constructs of knowledge science. Morse (1997) *Completing a Qualitative*

Project Details and Dialogue explained qualitative meta-analysis was first used by Stern

and Harris in 1985 to refer to the synthesis of a group of qualitative research findings into one explanatory interpretative end product. (Morse, 1997, pp. 312-313, 323, 324)

Chapter three illustrate a qualitative meta-analysis as being performed to examine knowledge science (KS) as an interdisciplinary body of knowledge; a meta-synthesis to triangulate meta-data, meta-method and meta-theory; a meta-analysis to characterize, generalize and explain KS, relating to business valuation, clarifying structural and ideological connections between important social processes. Midrange, construction of a substantive grounded theory (SGT) explain and describe relationships from examined statements and facts, interrelating thematic categories of: social philosophy, administrative philosophy, knowledge management as a philosophy, learning theory, administrative theory, organizational theory, legal theory, consumer theory, information theory, human labor theory, decision theory, decision field theory, innovation diffusion theory, technology, art as management, science as management, management theory, value theory, values-based management (VBM), management-by-values (MBV), marketing theory, exchange theory, gift theory, equity theory, economic theory and entrepreneurship theory from a Bayesian likelihood prescriptive level. The design comprise content analysis processes as objective data collection (Phase 1), triangulation technique by sets of information (theoretical, operational, concrete—Phase 2) for investigation, and meta-method to critically interpret strengths and limitations (Phase 3). The meta-data extraction on benchmark narrative data came from library and online library archive databases, inspected by abstract statements, tables of content, limited view links such as Google books, and observed field notes. I set apart thirty (30) credible

works as a benchmark (or parametric assumptive) of the full-scaled literature based sample size.

Knowology has strengthened transdisciplinary and interdisciplinary research discipline, which brings to mind a value-laden bias. Despite the fact of that, valid evidence, rational choice and researcher as an essential instrument served accountability purposes and truth value. Researcher as investigator providing the data needed to conduct a meta-data-analysis provided the study confidence and consensus for achieving scholarly voice on research, asking have, has, does, and how produced knowledge serve a scholarly purpose, and its usefulness to training practitioner's. The idea and principle sampling criterion developed from literature review were subjective descriptors (SU) on boolean string-wild card searches utilizing the IGI Global Disseminator of Knowledge E-database tools from the Walden University library; identifying a few most widely utilized processes or programming enveloping social science, service science, and systems science within the central theme of knowledgeability. Finding the truth-in-statements experience reflect developed field research capabilities and a social change benefit whereat generated intelligence can be repeatedly used as a search criteria on the concept trilogy of knowledge science (KS). Furthermore, practiced derived experience can be a utility, as an exchange system that deals with all three basic types of knowledge repositories—external knowledge, structured internal knowledge, and informal internal knowledge; "[t]he key to general management is to see it as a collection, not of separate modules, but of interdependencies.... Knowledge is only one subset of information… knowledge only takes you so far: all major developments have sprung from the application of imagination" (Smith, 2007, p. 776). Madsen (1970) make clear scientific

theory production processes are composed of three levels. The descriptive level (D-Level, a Pearson probability descriptive level) give descriptions of observations on objects and events in an observational or "data language" epistemological point-of-view. The hypothetical level (H-Level) give explanations and predictions in "hypothetical language" that represents hypothetical constructions and models (i.e., historical and psychological point-of-view). The meta-theoretical level (M-Level) give arguments about methods, theory-construction and philosophical presuppositions in a 'metalanguage' (meta-theoretic point-of-view) (p. 138). If an information-seeking activity is to produce to the standard of scientific research, there must be a continuous corrective feedback from the description of empirical research to the H-Level and the M-Level. Pearson's view derived two contrasting interpretations of the decision concept, which are useful within the knowledge science concept; behavioral as a confidence concept, and evidential as language concept (objective language and meta-language). Whether knowledge science valuation is split by Pearsonian probabilities or Bayesian likelihood, exploring and developing theoretical studies of static-dynamic human and automated decision making that prescribes what people should do or how something is done, is a critical realism. Collectively, analyses are linked and focused on four dominant knowledge management styles—adoption, standardization, systemization, articulation, and three dominant industries—systems-based, material-based, service-based and/or administrative service science. Knowledge science (KS) is important for social processes; the reason for the lack of details or vagueness on how and whereat KS is practiced, is that no one or a few in fact understands or can foresee it. Xiong, Zhong and Fenghua (2012) described service industries labor-intensive and intangible products as

the result of consumer or producer goods—*servitization* (also referred to as servitisation or servicisation), which are often consumed at the same time they are produced: a change in the condition of a person, changes the economic activities that produce time, place, form, or psychological utilities. This dissertation explored literature to advance the field of management knowledge, and its understanding of knowledge science where individuals and institutions can operate with a better economic sense, and generate a practical intelligence utility that can be repeatedly used as a rational expression affirming the five principles of service phenomenology: (1) competent service evolves, (2) service development is improvable, (3) service application is strategic, (4) service improvement is learnable, and (5) service operation is a form of social capital.

Summary

Overall literature review findings and statements provides defended and explained cause and consequence to given research situations, the clear rationale regarding prescriptive split of human-based and automated-based knowledge management-knowledge science (KMKS) practices; directly reflect upon the difficulties of disentangling prescription from description, and the meta-theoretical need for 21st century science education (a social interactive nature of knowledge). Literature reviewed built upon strategy maps as the most important task in a sequential stepwise process; for example, the balanced scorecard methodology, a sequential stepwise process has a human centric (linguistic) process model structure. A decision making trial and evaluation laboratory (DEMATEL) and fuzzy DEMATEL are systematic structural process modeling used as mathematical digraph or matrices on group consciousness of the problem(s) identified, and as an algorithmic representation on strong points having non-

linguistic productive emphasis on probabilities and critical theory interpretative

correlation (Jassbi, Mohamadnejad & Nasrollahzadeh, 2010). In addition, other journals

denoted that the most widely used methodology in systems thinking practice among

many fields is soft systems methodology (SSM) (Mingers & White, 1977).

Chapter three illustrate a meta-data-analysis design working between

epistemological and hermeneutic triangulation technique, working out language analysis

and thematic interpretations using document retrieval, and conducting research toward

answering the following questions:

RQ1: What field mechanisms make up knowledge science?

SQ1: What operative functions make up knowledge science (KS)?

SQ2: What is the relationship of knowledge science (KS) to the professional practice of

knowledge management?

SQ3: What is the principal theory of knowledge science (KS)?

Chapter 3: Research Methodology

Introduction

Action research established American practitioners knowledge production toward a knowledge science has simply failed (or been rejected) to define or formally structure knowledge science. The concept of knowledge science (KS) is very much tacit and there is a need to confront and challenge contemporary practice toward advancing a knowledge management knowledge science nature and theorem. What field mechanisms make up knowledge science? What operative functions make up knowledge science (KS)? What is the principal theory of knowledge science? What is the relationship of knowledge science to the professional practice of knowledge management?

Qualitative meta-analysis approach strengthens applied techniques and activities for examining knowledge science. Meta-data-analysis design framed epistemological and hermeneutic triangulation techniques. Content analysis and document retrieval were categorized by thematic interpretation using the senses of sentences between statements and facts. (Bermudez 2003 & 2009) I acknowledge being transdisciplinary brings to mind, a value-laden bias on data, valid evidence, and rationale. A substantive grounded theory (SGT) compared to a formal grounded theory (FGT) provided the study confidence and consensus for achieving scholarly voice on research, and answered those have, has, does, and how produced knowledge served a scholarly purpose, and yielded an analytical realism. Morse (1997) also explains meta-analysis of qualitative findings is a necessary way and important dimension in the development of qualitative research: the qualities produce more solid descriptive work and higher level theory.

The knowledge management knowledge science (KMKS) trilogy and related literature are discussed as a KMKS interdisciplinary practice produced by social science, service science and systems science. The purposive sampling as knowledge producing literature was extracted from library archive databases of The Ohio Library Information Network, Walden University Library, the Qualitative Data Repository (QDR – https://qdr.syr.edu/), and international journal databases. Narrative data was collected and examined by keywords, titles, authors, subjective Booleans, ISBN/ISSN, DOI, abstract statements, tables of content, limited view links such as Google books, and observed field notes. The principle of rigor that guides research findings can be determined as being credible and trustworthy by four factors: (a) truth value, (b) applicability, (c) consistency, (d) neutrality. Patterson (2001) argues that a meta-study involves two significant limitations: first, researchers decontextualize data by removing the senses of the sentences; second, researchers must clarify originally constructed context by the emotional and physical context.

> Beyond procedural evaluation, judging the quality of a meta-study project
> involves consideration of four essential questions:
>
> 1. Has it increased understanding of the body of research in the field of
> study?
>
> 2. Has it illuminated the implications of the contexts, methods, and
> theories that have influenced the body of research in the field?
>
> 3. Has it generated new or expanded theory?
>
> 4. Has it articulated an alternative overarching perspective about the
> phenomenon? (pp. 124-125)

Chapter four analyses was guided by research questions and put forward a knowledge science perspective, and present quality of information (QoI) emphasizing context, methods, and theories. Chapter five was an analytical and evaluative discussion on scholarly literature put forward to describe and formally structure answers to knowledge science research questions. Equally important, chapter five detailed what Morse (1997) identifies as three distinct meta-analytic models; theory building, theory explication, and theoretical development as a framework, which placed the study in an applied management and decision science practice context, and support the claim that building upon action research models generates new or expanded theory.

Research Design

Qualitative meta-analysis examined documentation as interdisciplinary research having a practice-research-theory framework, inductive to discovering objective truth, generalized and explained a reality of knowledge science. Data collection involved language analysis of a peer-reviewed literature-based sample, and triangulation technique compared and labeled data using open coding (noding). Bermudez (2003 & 2009) illustrated data construction from the analysis of language (the senses of sentences), denoting that propositional attitudes such as knowledge or belief have positive, negative, or no correlation, and build facts that a study having literary samples can prove realism as objective knowledge. This qualitative methodology as a data processing flow chart, breaks down analytical activities as value-in-use procedure(s) in phases as objective data collection—(Phase 1) *triangulation technique* by sets of information (theoretical, operational, concrete) for open coding, (Phase 2) *meta-analysis* to critically interpret

strengths and limitations, and (Phase 3) generalize findings as a *substantive grounded theory* consensus using mode (Mo—central tendency).

Phase 1
Researcher prepares and organizes the data

Triangulation Technique
Explore data, obtain text for open coding

Add coded text to soft application as meta-data

Phase 2
Researcher reduces the data by identifying themes and coding data elements

Meta-Analysis
Synthesize and Interpret information

Phase 3
Present data in narrative form, tables and/or visual diagrams

Substantive Grounded Theory (SGT)
Generalize findings as a consensus
to knowledge science (KS) theory

Figure 5. Qualitative Methodology Flowchart by Methodical Phases

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Narrative data identified relevant historical literature processes and factors which contributed to data collection procedures, and progressed by phenomenological research perspectives using peer-reviewed documents. The step-by-step design refrained from positing any hypotheses, and provided accurate descriptions from data collection. The chief data collection device was the researcher and document artifacts, and detailed records were kept in journals both hard and soft. The qualitative research process as a natural setting have physical being and physical qualities, employing document reviews

and recording what reality was observed in the collection. Figure 6 illustrates an

institutional review board (IRB# 08-18-15-0191875) guide step-by-step from data

collection to forwarding a theorem or theoretical concept of knowledge science.

PHASE 1
Data Collection Procedures (To do's)

1. **Data collection** (subjective selection of related KS data from social, service, and systems sciences, using Boolean operative and subjective searches from a consortium of library databases)
2. **Data reduction** (accept or reject selections, and compile sets of information)

3. **Data classification** (recording descriptions of behavior statements, feelings, thoughts, etc)
4. **Data organization** (manually selecting of data for coding process)

PHASE 2
Analysis and Validation Procedures

5. **Synthesis** of information
6. **Examination** of information for bias

7. **Analysis** and interpretation
8. **Produce meta-knowledge**

PHASE 3
Basis of the Meta-analysis

9. **Ground** the development of a theory related to Knowledge Science (KS)
10. **Report** on dissertation presentation

Figure 6. Qualitative Methodology Flowchart Step-By-Step

Justification for Research Design

Meta-data-analyses having literary samples can prove a realistic fit as objective knowledge. Knowledge science (core) literature is the new found body of hybridization literature evidencing good defenses, discussions, arguments, explanations, suggestions, claims and contradictions, which have reshaped naturalistic management perceptions and related critical issues. Substantiating literature as service phenomenology confirms service evolves, is improvable, strategic and learnable, and a form of social capital which also influences socio-economics. General literature connects core and substantiating literature defenses and claims by broadening the hermeneutical horizon and principles of knowledge science (KS)—definition, classification, valuation, and measurement of knowledge and tacit knowledge. Meta-data-analysis based on thirty (30) plausible works as a benchmark or parametric assumptive, provide two practical reasons for in-text evidence. First, in-text evidence demonstrates academic rigor by identifying disciplinary elements that pertain to the research problem: second, in-text evidence serves as an honest standard when confronting conflicting viewpoints. (Repko, 2008) Figure 7 illustrates and demonstrates a historical literature review linking theorists, theories, and models to knowledge management (KM). The important point is the figure shows a split between the applied profession sciences in a KM context, and the proposed gap toward a knowledge management knowledge science (KMKS) study.
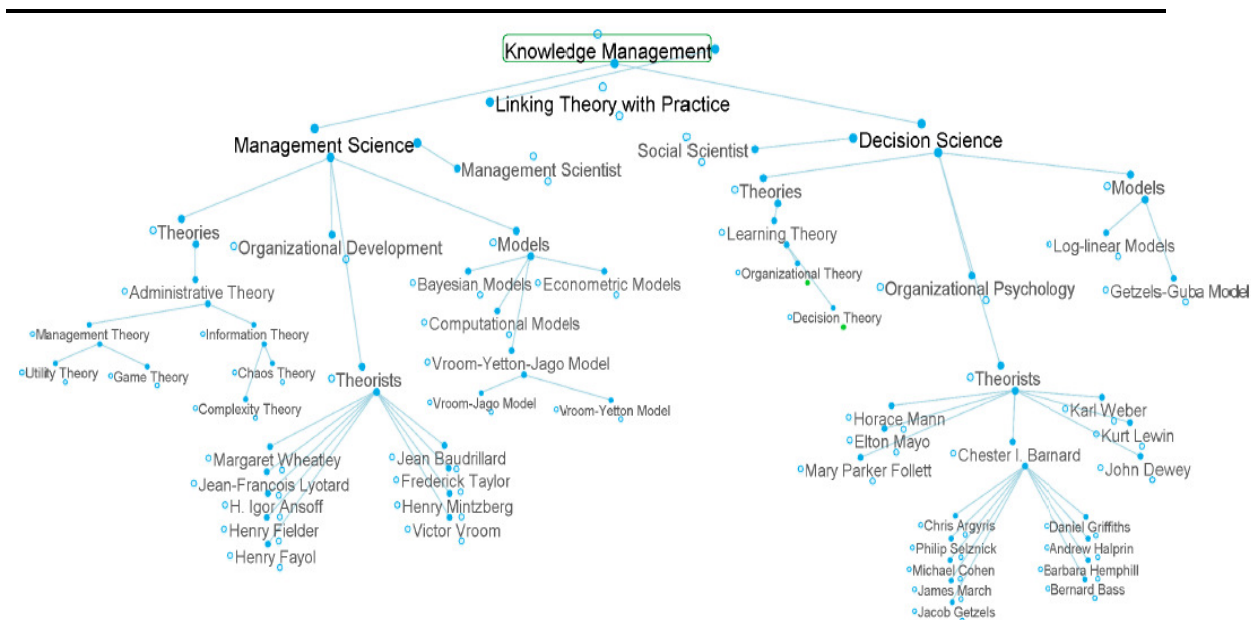
Figure 7. Theorists, theories, and models concept map

An emic approach place the researcher in the circle of subject matter understanding and make the researcher the essential instrument of the examination. Filling the gap between the reality and the theory, the theory and the practice, lead to the view that the gap is a knowledge production problem. Repko (2008) directly correlated that a discipline and the theories it favors, and the insights it produces, illuminates a particular problem. "In general, when interdisciplinarians identify a discipline as being relevant to the problem, they use one or more of that discipline's theories [to address that] problem" (p. 204).

Target Population and Sampling Procedures

NVivo software program was used as literary data collection storage, analytical tool, and/or means to ethically justify and demonstrate theory production, while formulating procedural norms as a four stage process on commonalities of data under study. Answering the research question presented – what field mechanisms make up

knowledge science, no matter how strong the detailed correlations or co-variations discussed in chapter four and five, efforts made to conduct soft analysis on meta-knowledge should not be seen as a quantitative test on formed theory, but as a constructivism on substantive grounded theory (SGT). Activities will either support or not support research question(s), whereas one could build on these findings by testing the province of the theory, quantitatively. Data collection involved language analysis of a peer-reviewed literature-based sample, and triangulation technique compared and labeled data, identifying anchors that provided key points of the data to be gathered (nodes).

Table 2.
Four Stage Analyses

Stage	Purpose
Nodes	Identifying anchors that provide the key points of the data to be gathered
Concepts	Collections of nodes of similar content that allows the data to be grouped
Categories	Broad groups of related concept synthesis used to generate *theory*
Theory	An interrelated set of constructs that specify a *theoretical rationale*

Note. Table construct provides the context for implementing Phase 2 meta-data-analysis; table format retrieved from Wikipedia. See Appendix D for complete proof (http://en.wikipedia.org/wiki/Grounded_theory#Four_stages_of_analysis).

Text analysis established similarity between field references by using text operators and functions, document stage developments, and rules and order used for analyses, software sharing and security, and data visualization as a by-product of the qualitative meta-analysis, which visually highlighted and detailed the presence of

descriptive data. Mirkin (2011) explains text analysis have two types of elements—concepts and statements relating them, which create different categories of relation between concepts, datasets, and its theoretical knowledge structure.

Theoretical noding may serve as a definite and precise categorical heuristic device for tree construction on empirically grounded categories. Data preprocessing techniques such as triangulation technique are necessary steps in the knowledge discovery process, and using intersubjectivity rules and/or approaches, such as the Fregean model approach; proffering a discrepancy detection to scrub and audit meta-data. Generating functions described by *Analytic Combinatorics* as integrated constructs that transfer theorems which lead to equations and defined classes of combinatorial objects. Sequences of words and strings lead to patterns, which lead to combinatorial parameters, node rules for labelling classes, and digraph mappings (sets of cycles, visualized as trees). Contrary to traditional treatments based on recurrences, generating functions encode the primary object by decomposing the literature into smaller structures either of the same type or of simpler types, then extracting recurrence relations and senses in the sentences into formal specification language. Utilizing NVivo is a symbolic approach principled to set-theoretic constructions; "[t]his principle is made concrete by means of a dictionary that includes a collection of core constructions, namely the operations of union, Cartesian product, sequence, set, multiset, and cycle… The translation into generating functions becomes, after this, a purely mechanical symbolic process" (Sedgewick & Flajolet, 2009, p. 15).

Research being proposed do not subject individuals to risk, and acknowledges I did not engage in replication logic or used redundant elements of published papers,

literature, or documents that present exactly the same data, discussions, and conclusions. Coding processes challenges central tendency (Mo) by the continuous cycling and memoing procedures, which lead researchers to trusting one's intuitive sense. Rather than, relying on empirical indicators within the data as a theorem that explains what is happening in the data. "Attributing meaning is not the goal of grounded theory; rather, its goal is to offer the reader a conceptual explanation of a latent pattern of behaviour that holds significance within the social setting under study" (Bryant & Charmaz, 2012, p.268)., Information sharing and knowledge sharing are the power of persuasion which involves preferences and collaborative arrangements, and confirms knowledge management practices are varied by knowledge culture, knowledge infrastructure, information resources, and feedback. Qualitative meta-analysis approach strengthens applied techniques and activities for examining knowledge science. Meta-data-analysis design framed epistemological and hermeneutic triangulation techniques. I acknowledge being transdisciplinary brings to mind, a value-laden bias on data collection, valid evidence, and rationale. Chapter four analyses was guided by research questions, involves increasing understanding of knowledge management knowledge science (KMKS), put forward a knowledge science perspective, and present quality of information (QoI) emphasizing context, methods, and theories that have influenced the body of research. Chapter five was an analytical and evaluative discussion on scholarly literature put forward to describe and formally structure answers to knowledge science research questions. Equally important, chapter five detailed what Morse (1997) identifies as three distinct meta-analytic models—theory building, theory explication, and theoretical development as a framework which identified the study in an applied

management and decision science practice context, and articulated alternative

overarching perspective about knowledge science.

Chapter 4: Results

Introduction

I conducted a qualitative meta-analysis exploring multidisciplinary literature to advance the field of management and its understanding of knowledge science (KS) where individuals and institutions can operate with a better economic sense, and generate a practical intelligence utility that can be repeatedly used as a rational expression affirming the five principles of service phenomenology: (a) competent service evolves, (b) service development is improvable, (c) service application is strategic, (d) service improvement is learnable, and (e) service operation is a form of social capital. Knowledge Management (KM) is the professional practice of management by objectives (MBO), by values (MBV), and by art (MBA) devising synergistic capacity as information intrapreneur for intellectual capital within three objective perspectives (i.e., decisions, management, and information), and three subjective sciences (systems, service, and social), the sense of synthesis (see *Figure 2.*). Knowledge Science as a critical synergistic capacity and synthesis having objective rationality of production management, and construction of learning, knowing and doing is a highly complex natural process transforming systematized value, rules, equity, and equality in a human phenomenology strategic context. KS provides a sense of understanding applied to:

1. Utility function theory – production

2. Information theory – environment

3. Decision theory - decision-maker

4. Decisions field theory – labor

5. Knowledge activity theory – investigator

Collectively these developments do not justify the claim of knowledge science (KS) to a specialty status within the field of knowledge management. The practiced derived key generative phrases technique (see Appendix F) and transformed multidisciplinary literature research into a philosophical opinion reiterating the two dynamics that play central roles in the prescription and description on decision making interactions, and a third dynamic that together plays the central role in knowledge science concept:

1. Knowing-in-action, dynamic know-how that reveal intelligent action—knowledgeability

2. Reflection-in-action, dynamics of critical thinking and function relative in measures of consciousness—comfortability

3. Activities, dynamics of natural absorption, doing and seeing being done; learning and process—investigative

The researcher as investigator providing the data needed to conduct a rigorous secondary meta-data-analysis established an objective truth, generalized and explained knowledge science, introduced the concept of a substantive grounded theory, and shaped fact that a study having literary samples can prove and support realism as case-based evidence of knowledge management knowledge science (KMKS) study and formal grounded theory. The principled literature linking theory with transdisciplinary practice as background knowledge and a pilot study sample, ultimately to quantify and qualify course of action and purpose, excluded literature of the physical sciences.

Scholar-practitioners and philosophers agree that new knowledge is created by building upon what we already know: What do we already know about knowledge science (KS), how does it occur in the context of other research, and what

recommendations can be made from practice derived theory for further research? In this dissertation, I proposed a third view and claimed that knowledge management practitioners as management philosophers must produce a generalized knowledge science (KS) to fill the gap between management and decision sciences. Knowledge management philosophy and methodology have been developing over several decades; knowledge activity theory, a self-evident fusion occurring in process interdependencies and people interactions (see *Figure 1*.) is the practiced derived formal grounded theory of communities of practice (CoP) beliefs, social norms and expected utility (see Appendix F—brain-activities-change-power-content-[by]knowledge-study[(practice)]); an extensive range of practical intelligence and actionable evidence that transforms people, process, and practice. Knowledge activity theory (KAT) is a causal process form of theory based nominal terms and determined relations identified by code book mechanisms (see Appendix D); a clear-cut phenomenon and critical interpretation, which validate this knowledge science trilogy and its formal grounded theory (FGT).

This research fills the gap and achieves the normative and hermeneutic explanatory demands by *knowology*, the study of knowledge as KS communicating investigative thinking, investigative behavior and investigative methodology as measures on knowledge assets, a utility of information that qualifies representation (physical and functional), and related brainpower relationships; a beliefs, preferences and constraints (BPC) model in action research and choice reasoning where knowledge management and theory are identified and engages readers with relevant applied practice toward science development.

The systems approach or systems thinking discipline intimately connected the human behavior domain science to applied management and decision science. The production possibilities of exploring and mapping knowledge indicated the driving forces on the dynamics of production yielded and evolved a hybridization of knowledge assets and a knowledge-based economy (see Appendix G). Given the distinctive elements of feelings, structures of meaning, ways of life and struggle (forces), and balancing attributes accordingly; includes preferences and collaborative arrangements that operationalized ethnic (nation state/sovereign state) custom decision and value theories. Hybridization of knowledge assets involves transdisciplinarity and confirms knowledge management (KM) practices are varied by knowledge culture, knowledge infrastructure, information resources, and environmental and organizational behavior. Knowledge as an economic transition valuing the new reality of forensic knowledge science, a triangulation on reasoning power shape and preserve developmental integrity, investigative possibilities (to articulate rediscovery), ethical aspiration (rejection of past structuring), compliance dependent services (CDS), client compliance behavior, and the physical, functional and relational aspects of representation.

Human labor power established a distinction between knowledge-producing workers and knowledge-using workers, which extended and expanded prototypical financial capital concepts of the applied profession. Rules and guidelines employed a principle that knowledge-producers contributed to knowledge transmission for an explicit purpose. Knowledge production is important, and its fulfillment on knowledge assets manifested in activities of human labor is relatively important to overall knowledge management (KM) field contribution and performance.

Knowledge science as the forensic science of applied management and decision science creates a paradigm shift and the social change to turnabout the rapid shifts in management direction, uncertainty, and untrustworthiness of the knowledge management craft. Freireian pedagogies served as a reflection of values and philosophy and stimulant to knowledge management as a philosophy, and knowledge science contributes to the growth of a more capable and rational freethinker in respective scholar-practitioner duties. In Chapter 5, I discuss the knowledge management-knowledge science (KMKS) investigation and how the concept can be applied in the field as

1. An entrepreneur science approach in support of intangibles management valuations

2. A competence initiative to strategic management research

3. A transdisciplinary skill that support corporate training needs as a consulting service

4. Curriculum tools to support competency in the areas of creative and critical thinking, problem-solving, technological literacy, global business education, leadership development, and career self-management

5. Forensic knowledge science

Social change, as how does questions and conditions leading to change, create capacity for change in practice (new skills or capabilities) and operation capability. Changes in process and investigation (examination and exploration) changes performance; changes in performance results in benefits and outcomes that change business and/or academic performance; therein, creating publicly, social change.

Sampling Selection

General literature connected core and substantiating literature as a hermeneutical sample having multidisciplinary and international peer-reviewed articles of knowledge, knowledge management, management, service science, administrative management, social sciences, decision science, philosophy, learning and education, psychology, production research, systems, and additional related domains and disciplines. This sampling educed and explored in an applied management and decision science (AMDS) research treatment, translated a transdisciplinary value into an observable knowledge management criteria:

- Organizational psychology view on knowledge management

- Decision science conceptual theoretical view on knowledge management

- Management accounting view on knowledge, and related intangible valuation

- Knowledge management view on science and practice

The sampling translated value into observable criteria, gave greater authority on theory and management, and showed the disciplinary perspectives on important work done in the field of applied management and decision science and the applied professions. The data record search has identified only relevant disciplinary insights and theories offered predominantly as major factors that gave rise to the positive or negative nature of knowledge science (KS) under specific conditions. The research variables of the study are labor, environment, production, and decision-maker, which are bound by an objective rationality of production management and the respective empirical laws. Decision science traditionally requires two academic intelligences–verbal/linguistic and

logical/mathematical. A verbal/linguistic reasoner examines, investigates and

triangulates knowledge production as an applied management and decision science,

makes the best data collection technique, and communicates production management as

intelligence analyses. Knowledge science general functions on work, environment, and

philosophy of personhood, like a mosaic or jigsaw puzzle, comes together when small

pieces of information are intact. Eventually, a clear picture of reality is observed. A full-

scale literature sample relating to the theme, theory, and argument toward an applied

knowledge science (KS) was collected. The selected peer-reviewed articles linking

theory with practice ultimately to quantify and qualify course of action and purpose,

excluded literature of the physical sciences. Theorists, theories, and models concept map

(see *Figure 3*) demonstrate explored and examined literature review samples, principles

and areas of inquiry—social philosophy, administrative philosophy, knowledge

management as a philosophy, learning theory, administrative theory, legal theory,

technology, art as management, and science as management. The selected sampling

research methods generally were qualitative and mixed method case study's that

addressed important practiced derived theory (PracDT), principles, empirical findings,

epistemological investigations, value-in-use, and competing theoretical arguments;

explored meta-science, meta-synthesis, meta-analysis, meta-language techniques, and

comparative field work contributions, which answered research questions and generated

relevant questions on what ought to be done. The idea and principle sampling criterion

was abstract review; narrative data collected and explored as being necessary and

sufficient causal chains of keyword mechanisms, titles, subjective Booleans,

classifications and observed field notes (see Appendix D). The principle of rigor and

replication that guided research findings can be determined credible and trustworthy by four transdisciplinary factors: truth value, applicability, consistency and neutrality.

Knowledgeability as the central theme of this research established benchmark/key references on 65 data records; thirteen framing the 485 multidisciplinary literatures explored, and used to build a complete picture of the knowledge management knowledge science relationship. The sampling selection are qualified to answer research questions by its dominant logic and high level language, triadic relationship of organizational trust, lack of cognitive bias by information sharing capacity (transdisciplinarity) connecting international cultures by interdisciplinarity, and the D-D-D principle: data drives decisions.

Data Gathering

Meta-data-analysis design framed epistemological and hermeneutic triangulation techniques: I chose to conduct the analysis this way as a secure knowledge process. Multidisciplinary literature data mining was conducted by self-knowledge (internal and informal) and query-based document retrieval using a point-n-click technique (macro program design) creating a hyperlink for replication. The point-n-click technique created a hyperlink to database results, prevented failures in synthesis, and established information-intensity practice. The meta-data extraction as knowledge production and accumulation was a general quality implementation approach for critical review and built-in crosschecks of disciplinary competence. In-text evidence demonstrated academic rigor by clearly demonstrating data saturation, and by identifying transdisciplinary elements that pertained to the research purpose and central themes. Second, in-text evidence served as an honest standard to developing theory, and demonstrating data

saturation by general principles having no new information, no new coding, no new themes, and the ability to replicate the study (see Appendix F & G). Figure 7 illustrated and demonstrated a historical literature review linking theorists, theories, and models to knowledge management (KM). The important point is that the figure shows a split between the applied profession sciences in a KM context, and the proposed gap toward a knowledge management knowledge science (KMKS) study; the *Five-Year Comparative Examination of Practice Derived Themes* (Appendix G) verifies meta-data-analysis data saturation by general principles of no new themes and no new information, and by identifying disciplinary elements that pertain to the phenomenon, and several theoretical schools of thought and knowledge management developments. The step-by-step design and researcher as the chief instrument refrained from positing any hypotheses, and provided accurate descriptions from data collection.

Data Collection

Data collection established a relational framework for conceptualizing and analyzing knowledge management knowledge science (KMKS) having an international scope. A multidisciplinary literature-based sample (435) preserved developmental integrity by the D-D-D principle that data drives decisions. Data collection combines direct peer-review and fit-to-purpose works advancing scholarly practice, fundamental theories, applied research and education curriculum shaping expectations and evaluations as hybridity. Data collection involved language analysis in the physical, functional and relational aspects identifying ordinary generating anchors, and key data representation. Fit-to-purpose relate data in ways that counteract possible threats to validity and reliability, which describes the data produced by different techniques used at periods in

social, service and systems sciences fieldwork developments (see Appendix G). The

literature-based sample transferred as data records and data collection to computer

application consisted of 385 peer-reviewed articles (2016 to 2011). The *QSR*

International NVivo 11 Plus software program was used as a literary data collection

storage and registry, analytical tool, and means to ethically justify and demonstrate theory

production; this application confirmed the argument that words rather than mathematical

calculations have power, and words are used to describe positions that reflects

expectations, exchanges and conditions of work. The articles shared philosophical,

technical, social, cultural and psychological frameworks from communities of practice

(CoP) and reflected the state of the art innovation and due diligence to service-dominant

logic. The data collection are qualified to answer research questions by its dominant

logic and high level language, triadic relationship of organizational trust, lack of

cognitive bias by information sharing capacity (transdisciplinarity) connecting an

international laureate culture by interdisciplinarity, and the D-D-D principle: data drives

decisions. A conceptual and theoretical framework using a meta-analysis technique is

formed by six phases—collection, conversion, fusion and form, transmission, valuation

by tools, and techniques: knowledge management (KM) clarifies metrics as measures of

key attributes yielding knowledge. Fundamentally, a comprehensive socio-cognitive

collection made of knowledge management application, analysis, synthesis, and

evaluation; whereat criteria and experience apply to people, process, practice, and

situations on which judgments are made. A hybridization collection best described as an

applied management and decision science dialogue and epistemic interest for a forensic

knowledge science grounded as knowledge activity theory.

Missing Data

Logical set of interrelated statements as causal process forms for theory provided understanding by a variety of methods currently being employed. I explored the nature of the design and practice applied in the qualitative meta-data-analysis being attentive to three sciences in the studies gathering and collecting, and determined literature appertaining to law was missing; incompleteness among incomparable alternatives, yet the task was extracting the best logical form toward a knowledge science. Knowing this, missing data significantly disposes the forensic knowledge science connection with forensic criminal science investigation. There is a need to carefully examine missing data for practice derived protocols, practices, rules, search and collection, classifications, quality and integrity. There are many instances in data records which validates the hybrid science of knowledge science whose premises are also true or concrete. Prior research (grounding data) arguments are not void of missing data; therefore, argument(s) and cognitive issues relating to knowledge management knowledge science (KMKS) research are still justified true belief.

- The mathematical conception of rationality lacks the right kind of normative force: literature is clear that mathematicians (decision theorists) proposed rational procedures for decision-making, which now dominate in the field of systems science (a bounded rationality).

- Words rather than mathematical calculations have power, and words are used to describe positions that reflect expectations, exchanges and conditions of work.

- Decision science does not meet the criteria of science, and thus has no aims to evident truths.

- Knowledge science is not a construction or integration on the areas of humanities, information science and natural science.

- Generating functions of Knowledge Science (KS) are a disjoint union and/or labelled product quality of social science, service science, and systems science from the viewpoint of applied management and decision science practice.

- Confidence argument on decisions of decision theory undermines standard practice and does nothing to resolve standard method.

Collection and Conversion of Data

Decisions, management, and information are three objective perspectives which devised a synergistic capacity or trilogy proffering systems, service, and socio-economics as three subjective sciences measuring knowledge, not just test curriculum and its applications. I acknowledge being transdisciplinary brings to mind, a value-laden bias on narrative data collection, valid evidence, and rationale. Peer-reviewed multidisciplinary literature progressed by phenomenological research perspectives, and researcher as chief data collection device integrated an interdisciplinary trilogy of social science, service science and systems science. These field mechanisms independently did not justify the thinking process of knowledge science as an interdisciplinary body of knowledge having interdependencies, and a practice-research-theory framework. Knowledge is a collection of information transitioned in the hands of an expert forming intelligence broad-based, wide-ranging, specialized-specific to a given situation; knowledge of a truth. The principle of rigor as stated in chapter 3 guided research findings truth value, applicability and consistency increasing knowledge science understanding in an applied management and decision science (AMDS) practice derived epistemic knowledge production. I

utilized QSR International NVivo 11 Plus decontextualizing data and removing the senses of the sentences, which showed the disciplinary perspectives on important work done, and work to be implemented in the AMDS field and applied professions. Data collection established a relational framework having an international scope: 385 peer-reviewed articles (2016-2011) advancing scholarly practice and fundamental development of practice-derived-theories (PracDT). A hybridization collection best described as an applied management and decision science dialogue and epistemic interest for a forensic knowledge science grounded as knowledge activity theory.

Key generative phrases technique (see Appendix F) transformed multidisciplinary literature research into a philosophical opinion reiterating three dynamics, which play central roles in the prescription and description on decision making interactions and the forensic knowledge science concept:

1. Knowing-in-action, dynamic know-how that reveal intelligent action—knowledgeability

2. Reflection-in-action, dynamics of critical thinking and function relative in measures of consciousness—comfortability

3. Activities, dynamics of natural absorption, doing and seeing being done; learning and process—investigative

Finding the truth-in-statements experience identified field research capabilities and a social change benefit whereat generated intelligence can be repeatedly used in many cases. Furthermore, meta-cognitive experiences shows utility as an exchange system that deals with all three basic types of knowledge repositories—external knowledge, structured internal knowledge, and informal internal knowledge for conversion processes.

Data science is one part analysis and one part art: language depends upon emotion and cannot be separated, meaning that there is no universal language; you are looking at trait or characteristic as sets of strings (sequences of characters), patterns in data or language in data that leads to the discoveries that you can make (see Appendix F). Analyses were guided by research questions focusing understandings on knowledge management knowledge science (KMKS) to put forward a knowledge science perspective, and present quality of information (QoI) emphasizing context, methods, and theories that have influenced the body of research. The term qualitative meta-analysis was used in reference to the synthesis of a group of qualitative research findings into one explanatory theory, model, or description. Meta-analysis as a new and integrative interpretation of findings to assess a field of study beyond one particular study, attempts to conduct a rigorous secondary qualitative analysis of primary qualitative findings. Meta-data-analysis design framed epistemological and hermeneutic triangulation techniques.

Data Analysis

The meta-data extraction on benchmark narrative data came from Walden University library, ebrary and academic search complete, business source complete, PsycARTICLES and SocINDEX databases; peer-reviewed articles were inspected by abstract statements and perusal of content (language analysis). Content analysis processes on objective narrative data collection generated sets of information for investigation, and meta-method using triangulation technique, open coding by time-stamp labeling to critically interpret central themes, values and fit-to-purpose discourse. Fit-to-purpose relate data in ways that counteract possible threats to validity and reliability,

which describes the data produced by different techniques used at periods in social, service and systems sciences fieldwork developments (see Appendix G). Fundamentally, a comprehensive socio-cognitive process made of knowledge management application, analysis, synthesis, and evaluation; whereat criteria and experience apply to people, process, practice, and situations on which judgments are made (see *Figure 6.*). Knowledge management (KM) clarifies metrics as measures of key attributes yielding knowledge. NVivo 11 qualitative analysis was used as an additional analytical tool to ethically justify and demonstrate generalized findings of knowledge activity theory (KAT).

QSR International released NVivo 11 Plus featuring more complex analytical techniques and queries were utilized to construct relationship coding, pattern based auto-coding, auto-code by structure, matrix coding and coding comparison queries, framework analysis, advanced visualizations (tree maps, geo-visualizations, cloud clusters, concepts and mind maps), cluster analysis, automated insights, and more. Utilizing NVivo is a symbolic approach principally as a generating function for data analysis, and the primary literary data collection storage and analytical tool.

Text analysis established similarity between peer-reviewed literature by using text operators and functions, document stage developments, and rules and order used for analyses, software sharing and security, and data visualization as a by-product of the qualitative meta-analysis, which visually highlighted and detailed the presence of descriptive data. Sequences of words and strings lead to patterns, which lead to combinatorial parameters, node rules as data and field mechanisms, and digraph mappings (sets of cycles, visualized as trees, clusters, and clouds). Contrary to traditional

treatments based on recurrences, generating functions encode the primary object by decomposing the literature into smaller structures (i.e., removing the emotion coupled with writing) as themes and frequency of occurrences, and coding the results. Groupings either of the same type or of simpler types (generalizations or specialism), then are extracted and coded as having recurrence relations and processes coded language into formal specification language. Utilizing NVivo 11 is a symbolic approach principled to set-theoretic constructions; this analysis confirmed the argument that words rather than mathematical calculations have power, and words are used to describe position that reflects expectations, exchanges and conditions of work.

Abduction as the logical form of analyses on the basis of an interpretation of collected data for a new explanation affects both public and business management processes, and the relationship between context, goals, policy instruments, and choices; decision making that is both informed by public interest and a systems approach to knowledge synthesis. There is a strong bias toward identifying, managing and sharing as a learner centric view of capability to act effectively, as opposed to the commonly accepted information centric view derived from information assets.

Research Questions Findings

Research questions invariably occur while reviewing literary life, and empirically developed as new constructs or relationships establishing social change in the areas of management accounting, finance, valuation, knowledge management, and claimed knowledge science by extending and developing prototypical phenomena and its intangible asset/intangible management nature. Exploratory research and theoretical principles considered, formed functional intelligences by a prolonged timeline of 1896—

2013 (see Appendix A,B,C), and their related research development activities on intellectual property (IP), knowledge capital, social capital, human capital, structural capital, learning hypotheses, and learning practices on three levels—individual, group, and organizational. What field mechanisms make up knowledge science? What operative functions make up knowledge science (KS)? What is the principal theory of knowledge science (KS)? What is the relationship of knowledge science (KS) to the professional practice of knowledge management? These questions address the problem of vagueness and realize a clearer sense or perspective of knowledge science is necessary and a novel way to transform scholarly writing, transform knowledge management practice, and publicly create capacity for new skills and capabilities; a social change where individuals and institutions can operate with a better economic sense. Individuals immediate task at business schools is not training; in the use of decision theory but research, in how to apply decision theory, in how to phrase questions concerning knowledge unknowns, which will make it as easy as possible for decision makers to come as close as possible to expressing true judgments. Future theoretical perspectives will involve applied management and decision science practice of knowledge science, which create social and cultural change for the individual researcher, academe, governments and the commercial marketplace.

Overall, findings and statements reflect that knowledge management (KM) and the study of knowledge science (KS—knowology) have not become a theoretically saturated field. Knowology, the study of knowledge as knowledge science communicates field mechanisms which make up knowledge science as investigative thinking, investigative behavior and investigative methodology; decisions, management, and

information are three objective perspectives which devised a synergistic capacity or

trilogy proffering systems, service, and socio-economics as three subjective sciences

measuring knowledge. Peer-reviewed multidisciplinary literature progressed by

phenomenological research perspectives, and researcher as chief data collection device

integrated an interdisciplinary trilogy of social science, service science and systems

science. These field mechanisms independently did not justify the thinking process of

knowledge science as an interdisciplinary body of knowledge having interdependencies,

and a practice-research-theory framework. The nature of these mechanisms is

appropriate as formula language construct forms, and creates rules and codes for database

query as keywords and statements leading to main subjective idea delimiters (see

Appendix D). Activities, the dynamics of natural absorption, doing and seeing being

done; learning and process synthesizes the state of management affairs in the context of

applied management and decision science, and the knowledge science construct variables

of production, environment, labor and decision-maker which are bound by an objective

rationality of production management and the respective empirical laws (see, *Figure 2.*)

A utility of information that qualify representation (physical and functional), and related

power relationships (authority). Decision science traditionally requires two academic

intelligences–verbal/linguistic and logical/mathematical. A verbal/linguistic reasoner

examines, investigates and triangulates knowledge production as an applied management

and decision science; communicates production management as intelligence analyses.

The field of management general operative functions on work, environment, and

philosophy of personhood are control and coordination. Fundamentally, a comprehensive

socio-cognitive process applied to people, process, practice and situations on which

judgments are made, clarified that knowledge management (KM) metrics as measures of key attributes yielding knowledge answers the question of what operative functions make up knowledge science (KS) as investigation and synthesis. Knowledge science defined is knowledge investigation; activities of knowledge intensive work which leads to evidence and proof using an investigation methodology (ACE). A knowledge synthesis that transpire when we investigate know what, know why, know where, know when, know who, and know how within service and product environments; an investigatory process on ordinary generating functions controlling and coordinating knowledge activities as transformative theory/theories and interpretive forensic applications. Meta-data analysis made the evidence physical by correlating themes, language analysis of themes, and generative word and phrases of communities of practice (CoP).

Human labor power established a distinction between knowledge-producing workers and knowledge-using workers, which extended and expanded prototypical financial capital concepts of the applied profession. Rules and guidelines employed a principle that knowledge-producers contributed to knowledge transmission for an explicit purpose. Knowledge production is important, and its fulfillment on knowledge assets manifested in activities of human labor is relatively important to overall knowledge management (KM) field contribution and performance. The production possibilities of exploring and mapping knowledge indicated the driving forces on dynamics of production, yielded and evolved a hybridization of knowledge assets and a knowledge-based economy (see Appendix G). Given the distinctive elements of feelings, structures of meaning, ways of life and struggle (forces), and balancing attributes accordingly; includes preferences and collaborative arrangements which operationalized ethnic (nation

state/sovereign state) custom decision and value theories. The systems approach or systems thinking discipline intimately connected the human behavior domain science to knowledge management. Abduction as the logical form of analyses brings together new explanation in parts: rules and routines affecting both public and business management processes, and the relationship between context, goals, policy instruments, and choices; decision making that is both informed by public interest and a systems approach to knowledge synthesis. There is a strong bias toward identifying, managing and sharing as a learner centric view of capability to act effectively, inverse to the commonly accepted information centric view where identifying, managing and sharing are derived from information assets. Abduction consists of assembling or discovering, on the basis of an interpretation of collected data for a new explanation: a logical form of operation from a known quantity (=result) to two unknowns (=rule and case). Therefore, a cerebral process, an intellectual act, a mental leap, that brings together things which one had never associated with one another and confirms intuition: a cognitive logic of discovery. Activities, the dynamics of natural absorption, doing and seeing being done; learning and process synthesizes the state of management affairs in the context of applied management and decision science, and the knowledge science theoretical construct variables of utility function theory, information theory, decision field theory and decision theory are bound by an objective rationality of production management and respective information centric empirical laws (see, *Figure 2.*). Analysis as practice derived theory (PracDT) frames beliefs, social norms and expected utility; knowing this, the principal theory of knowledge science is knowledge activity theory (see, Appendix F): an extensive range of practical intelligence and actionable evidence that transforms people, process, and

practice; a clear-cut phenomenon and critical interpretation, which validates this knowledge science trilogy with formal grounded theory. Knowledge management philosophy and methodology have been developing over several decades, and knowledge activity theory is self-evident truth, and the fusion occurring in process interdependencies and people interactions (see, *Figure 1.*). Furthermore, knowledge management philosophy and methodology have created capacity for change in practice (new skills or capabilities) and operation capability: applied ethics of efficiency, applied research, creative intelligence, strategy process (action-decision dynamic), value premises, factual premises, transdisciplinarity, decisional capacity, analytic and evaluative reflection and sage.

Knowledge management (KM) as an umbrella term for overseeing activities within management science and decision science served as a reflection of values and philosophy, and knowledge management state of affairs as a philosophy and this knowledge science contribution to the growth of a more capable and rational freethinker in applied management and decision science scholar-practitioner duties. Analytic function is represented by a power-series expansion in complex analysis (integration) and the relationship of knowledge science (KS) to the professional practice of knowledge management is whereat processes of brainpower as conscious awareness or subconscious awareness lead to discoveries that you can make: the distinction of forensics. The whole of forensic knowledge science is meta-cognitive experiences acquiring knowledge which comes back to knowledge activity theory; even though the logic remains fuzzy, self-study is the chief means of gaining this special knowledge. Knowledge science is applied management and decision science investigation:

1. Language depends upon emotion, and you cannot separate both

2. Knowledge is for acting upon

3. Knowledge is metaphysical

Knowledge science (KS) synthesis occurs when we investigate brainpower within a workforce environment (see, *Figure 1.*); it is managing professional intellect by an investigatory process whereat knowledge science is defined, bound and applied. Epistemology assumed in the literature that knowledge tend to privilege the individual (intuitive-sense) over the group (consensus), and form the epistemology of possession and practice prioritizing service value. How the interplay of knowledge and knowing can generate new knowledge and new ways of knowing within organized human activity serves to justify proposed research as an applied management and decision science (AMDS) business case study; a state of business evaluation as intangibles management. Knowledge science as the forensic science of knowledge management creates a paradigm shift and the social change to turnabout the rapid shifts in management direction, uncertainty, and untrustworthiness of the knowledge management craft. Knowledge science (KS) defined is knowledge investigation; activities of knowledge intensive work which leads to evidence and proof using an investigative methodology. The principles built into the forensic knowledge science methodology:

1. The development of a true forensic science

2. Develop procedures and practices for doing the work

3. The development of a work force creating a balance of power between management, labor and the marketplace

4. Protection of information

5. Access a plentiful research and development budget

6. Value

7. Value stream

8. Pull

Hybridization of knowledge assets involves transdisciplinarity and confirms knowledge management (KM) practices are varied by knowledge culture, knowledge infrastructure, information resources, and environmental and organizational behavior: knowledge as an economic transition to valuing the new reality of forensic knowledge science shape and preserve the power to compare developmental integrity, investigative possibilities (to articulate rediscovery), ethical aspiration (rejection of past structuring), complianced dependent services (CDS), client compliance behavior, and the physical, functional and relational aspects of representation. The relationship of knowledge science (KS) to the professional practice of applied management and decision science although a technical discipline; as a forensic science have disciplined use of the tools of science, and curriculum requiring learning how to observe details and follow a disciplined thinking process, analyze information, interpret, test and measure to make critical decisions (methodology); the true measure of an expert's value is informing and persuading. Forensic science is grounded by three (3) distinct transdisciplinary steps of investigatory methodology; analysis, comparison, and evaluation (ACE). The Daubert factors set out governing rules of scientific evidence, and principles and methodology of the expert.

Summary

Knowledge science constitutes science for knowledge management philosophy. Our system's goal must be to improve practice and develop ideas and activities that link knowledge management activities not only to impact business, but publicly create capacity for new skills and capabilities; a social change where individuals and institutions can operate with a better economic sense: individuals whose immediate task at business schools is not training in the use of decision theory but research. Policy-makers and other business and public administration stakeholders also share interest and analysis of this knowledge science trilogy; the varying degrees of desired confidence, and challenges that a knowledge science study could be safely undertaken infer a service-dominant logic within the applied management and decision science field.

Service science, management, engineering, and design (SSMED) are knowledge-intensive on customer-provider interactions, and a normative perspective reflecting driving forces on controlled results and life cycle interaction. Other normative value theory conceptions that can be used for further study and research could relate to social justice theory by rule of law and right (administered by justice). Can a science of public administration deliver the ends on public sector activities, in reality of New Public Management (NPM) or will Knowledge Management Knowledge Science (KMKS) platform deliver the ends on a public sector investigatory nature? I have characterized, generalized and explained the disjoint union or label product quality of knowledge science as a hybrid science for learning, knowing, and practice.

Chapter 5: Discussion, Conclusions, and Recommendations

Significance of the Study

The researcher as investigator providing the data needed to conduct a rigorous secondary meta-data-analysis established an objective truth, generalized and explained knowledge science, introduced the concept of knowledge activity theory (KAT), a formal grounded theory, and shaped fact that a study having literary samples can prove and support realism as objective management research. Scholar-practitioners and philosophers agree that new knowledge is created by building upon what we already know: KAT has not been subjected to peer-review or publication nor quantitatively tested, which suggests that a knowledge management dialogue must be initiated for general acceptance of the theory and areas of valuation. The premise derived from problems in practice and systems goal to improve practice by creating knowledge management activities to business impact (KMKS), return on investment (ROI), and develop intangible quality by trained disciplinary scholar-practitioners. This work is an original research study relating to interdisciplinary research: knowledge production toward a knowledge science is limited. *The Trilogy of Science: Filling the Knowledge Management Gap with Knowledge Science and Theory* informs management on the value and defended qualities of knowledge intensive business service (KIBs). An entrepreneurial value providing new vision, improving education, and serves to:

1. Engage intangibles adding to stock of what is known

2. Promise interests to create a state of knowing

3. Provide solutions

4. Train practitioner and applied professionals

5. Produce more value

Knowledge science is the bridge from knowledge management as business (IT engaged) discipline to knowledge management as a philosophy and scholarly-practice doing knowledge management as a forensic knowledge science, and applying the research on an intelligence paradigm/platform and related value flow. Scholar-practitioner goal is improving practice by creating knowledge management activities for business impact, return on investment, and develop intangible quality by interdisciplinary activities. Knowledge science is a critical synergistic capacity and synthesis having objective rationality of production management, constructs on knowledge management learning principle, knowing and doing; it is a highly complex natural process transforming systematized value, rules, equity, and equality in a human phenomenology strategic context. Knowledge science as the forensic science of applied management and decision science creates a paradigm shift and the social change to turnabout the rapid shifts in management direction, uncertainty, and untrustworthiness of the knowledge management craft. Knowledge science contributes to the growth of a more capable rational freethinker of applied management and decision science scholar-practitioner duties.

Presenting quality of information (QoI) emphasizing transdisciplinary knowledge activities, brainpower, philosophical change by values, by theory, and of traditional legacy formally grounding knowledge activity theory (KAT), serves and sensitizes readers to the nature of meta-synthesis; a triangulation of meta-data analysis, meta-method, meta-theory. Equally important, government regulation has created such perspective change in the field of knowledge management, the multidisciplinary literature concepts relating to the relationship of and between practical managerialism and

literature, advocated and validated the central belief of hybridization. The production possibilities of exploring and mapping knowledge indicated the driving forces on dynamics of production, yielded and evolved a hybridization of knowledge assets and a knowledge-based economy (see Appendix G). Hybridization of knowledge assets involves transdisciplinarity and confirms knowledge management (KM) practices are varied by knowledge culture, knowledge infrastructure, information resources, and environmental and organizational behavior: knowledge as an economic transition to valuing the new reality of forensic knowledge science shape and preserve the power to compare developmental integrity, investigative possibilities (to articulate rediscovery), ethical aspiration (rejection of past structuring), complianced dependent services (CDS), client compliance behavior, and the physical, functional and relational aspects of representation. Hybridization as a trilogy on social science, service science, and systems science inspire theoretically, and supported and strengthened the literature examination on the dissertation research questions. Collectively these developments do not justify the claim of knowledge science to a specialty status within the field of applied management and decision science or knowledge management, yet serves as a paradox that perhaps allowed another to answer questions such as what is the average time to get from one cycle to the other; is the established order not significant or is the established order significant; what is the average time in a cycle; are the illustrated construct sequences, cycles, sets or cycles within just one cycle; is the unique integration admissible constructs, which permit direct translations into supplementary generating functions?

Limitations of the Study

We must accept the fact that information systems only derive information if knowledge science is to adapt and build the concept that developments of information into knowledge require people. Man-in-the-machine was management information systems' way to circumvent the transformation fact that knowledge is derived from human (people) value-in-use and use-value. Knowledge Management is the study of knowledge routines: a management paradigm for continuous dynamic repurposed business intelligence, which enables best-in-class enterprise operation research and management; curriculum tools to support competency in the areas of creative and critical thinking, problem-solving, technological literacy, global business education, leadership development, and career self-management. This research and analysis gave way to a knowledge science (KS) trilogy, and an objective limitation came to light, natural and routine of the culture concept: not all objective experience can be transformed or transferred into subjective states. The global business environment involve information transfer, market analysis, information tracking, digital technologies and the presumed need for speed on response logic; production functions that involves efficiency and estimation, and may add or detract responsibility, strategy, or style of tactics. This research is limited by digital technologies and information tracking scope and its related speed on response logic; an analysis based on database choice and multiple techniques that may have potential adverse effects on a replication study (i.e., to replicate results using different databases or data sources).

Data Analysis for Research Questions

Abduction as the logical form of analyses grounds interpretation for new explanation by the relationships between context, goals, policy instruments, and choices, and decision making that is both informed by public interest and a systems approach to knowledge synthesis. A meta-analysis based on critical interpretative language analysis and meta-synthesis using triangulation on meta-data, meta-method and meta-theory as the:

- Nature of interpretation is exposed and extended beyond available body of knowledge (i.e., it offers a historical and theoretical analytic approach to making sense of derived knowledge)
- Investigation becomes results and process driven
- Comparative analysis on the findings and theoretical linked
- Data produces a midrange theory that explains and describes relationships between qualitative findings
- Findings are constructed by specific accordance of interpretative skills

The meta-data extraction on benchmark narrative data came from Walden University library, ebrary and academic search complete, business source complete, PsycARTICLES and SocINDEX databases; peer-reviewed articles were inspected by abstract statements and perusal of content (language analysis). Content analysis processes on objective narrative data collection generated sets of information for investigation, and meta-method using triangulation technique, open coding by time-stamp labeling to critically interpret central themes, values and fit-to-purpose discourse. Fit-to-purpose relate data in ways that counteract possible threats to validity and reliability, which describes the data

produced by different techniques used at periods in social, service and systems sciences

fieldwork developments (see Appendix G). Meta-data-analysis made the evidence

physical by correlating themes, language analysis of themes, and generative word and

phrases that can be adapted to the research questions; utilizing NVivo software was a

symbolic approach principally as a generating function for the primary literary data

collection. Fundamentally, a comprehensive socio-cognitive process made of knowledge

management application, analysis, synthesis, and evaluation; whereat criteria and

experience apply to people, process, practice, and situations on which judgments are

made (see *Figure 6.*). Knowledge management (KM) clarifies metrics as measures of

key attributes yielding knowledge. Knowledge building as a collective cognitive

responsibility without the conscious elements of control over the outcome reflects and

shows research as being:

- Focused on routines and procedures (factual)

- Centered on evaluation and practical outcomes (procedural)

- Centered on rationales (justificatory)

- Focused on critical examination as it impacts social justice (critical)

Exploratory research and theoretical principles considered and formed functional

intelligences by a prolonged timeline of 1896 to 2013 (see Appendix A,B,C), and their

related research development activities on intellectual property (IP), knowledge capital,

social capital, human capital, structural capital, learning hypotheses, and learning

practices on three levels—individual, group, and organizational derived research

questions, and empirically developed as new constructs or relationships. The whole of

forensic knowledge science is meta-cognitive experiences acquiring knowledge which comes back to knowledge activity theory. Even though the logic remains fuzzy, self-study is the chief means of gaining this special knowledge. How the interplay of knowledge and knowing can generate new knowledge and new ways of knowing within organized human activity serves as an alternative overarching perspective to justify proposed research data analysis as an applied management and decision science (AMDS) business case study.

Assumptions

The applied professions must accept the fact that information systems only derive information if knowledge science is to adapt and build the concept that transformations of information into knowledge require people. I presented a positive argument that interdisciplinary collaboration was limiting the knowledge management developments, and now rejects that denoted limitation observing lack of knowledge sharing was not in evidence or proof.

1. I principally introduced the knowledge management and knowledge science purpose was ultimately to know the value of intangibles (knowledge-based assets)—measurements of utility of information, value of utility function to business, and quantifying and qualifying courses of action. This inference can be qualified by the research that knowledge management knowledge science (KMKS) is to qualify quality knowledge products by investigative thinking, investigative behavior, and investigative methodology and representation.

2. I assumed and accepted three dominant methodologies: qualitative, quantitative and comparative (mixed-methods); this inference can be qualified by the meta-

cognitive experiences that I failed to accept investigative methodology as a fourth research paradigm.

3. I principally introduced the lack of explicit information sharing and knowledge sharing created vagueness in the literature on the concept of knowledge science. This inference can be qualified by the research that sharing as the power of persuasion are valued and build the transdisciplinarity platform within the knowledge management field.

4. I presented a positive argument that interdisciplinary collaboration was limiting the knowledge management developments, and now rejects that denoted limitation observing lack of knowledge sharing was not in evidence or proof. The current literature collection for this study still provided no evidence or proof to an effective transfer, change and transformation of knowledge science (KS) fieldwork in communities of practice (CoP); the most recent literature (2013) reflecting and advancing KS concepts and approaches is an electronic book and hard copy book format, yet activities of knowledge intensive work that leads to evidence and proof using an investigation methodology have not derived relevant research from peer-reviewed CoP.

Answering the Research Questions

Overall, findings and statements reflect that knowledge management (KM) and the study of knowledge science (KS--knowology) have not become a theoretically saturated field. Knowology, the study of knowledge as knowledge science communicates field mechanisms as investigative thinking, investigative behavior and investigative methodology. Fundamental and compound processes on knowledge assets as a utility of

information that qualify representation (physical and functional), and related power relationships (authority) on data analysis made the evidence physical by correlating themes, language analysis of themes, and generative word and phrases of communities of practice (CoP). I reviewed qualitative case studies and presented practice derived evidence (PracDE) as narrative data understandings on knowledge transfer processes, associative learning models, strategy mapping and mining techniques, value creating systems and platforms, and language analysis that reinforced the usefulness of training practitioners in field research. Knowledge production by trained disciplinary scholars is relevant disciplines identified, explored, and considered based on advancing applied management and decision science field expertise.

The knowledge science (KS) conceptual framework has implications for advancing field knowledge and presents a view of language analysis, while explaining meta-knowledge production by qualitative meta-analysis. Meta-data-analysis design working between epistemological and hermeneutic triangulation technique and working out language analysis and thematic interpretations using document retrieval identified anchors that provided key points of the data to be gathered and developed toward answering the research questions. I have characterized, generalized and explained the disjoint union or label product quality of KS as a hybrid science for learning, knowing, and practice. Social justice theory by rule of law and right constructs qualify representation (physical and functional) and related power relationships as underlying knowledge actualities of knowledge science. Communicating investigative thinking, investigative behavior and investigative methodology forms and serves a forensic knowledge science premise. Knowledge science as an applied profession of applied management and decision science

(AMDS) serves as a forensic science by thinking process, analyzing information, interpreting, testing, and measuring to make critical decisions: true measures of experts informing and persuading the value and tools of science. Curriculum requiring learning how to observe details (see knowledge, reality, and practice in its entirety) and following technical discipline is a forensic science body of knowledge grounded by three distinct transdisciplinary steps of investigatory methodology: analysis, comparison, and evaluation (ACE).

Implications and Recommendations for Action

Knowledge science constitutes science for knowledge management philosophy. Our system's goal must be to improve practice and develop ideas and activities that link knowledge management activities not only to impact business, but publicly create capacity for new skills and capabilities; a social change where individuals and institutions can operate with a better economic sense. Individual whose immediate task at business schools is not training in the use of decision theory but research.

Policy-makers and other business and public administration stakeholders also share interest and analysis of this knowledge science trilogy; the varying degrees of desired confidence, and challenges that a knowledge science study could be safely undertaken infer a service-dominant logic within the applied management and decision science field.

Recommendations for Further Study

Asking further questions about knowledge management philosophy; doing

applied management and decision science as a forensic knowledge science call for

collaboration. Acknowledging we have a problem with vagueness both tacitly and

explicitly when engaging knowledge science logic, and developing practitioner activities

as an applied management and decision science intelligence makes matters clear, and

important that we identify, clarify and assess whether we would be better off stepping

outside of current field framework completely, or would trying to replace it with a better

one result in greater advances.   Knowledge management (KM) practitioners are not

theoretically saturated with knowledge science theory concepts, and to devise, extend or

build apropos theory develops research knowledge as a social change benefit where

individuals and institutions can generate a practical intelligence utility that can be

repeatedly used as a rational expression on the concept of knowledge science. An

entrepreneurial adjunct approach interpret knowledge management knowledge science

(KMKS) as an advantageous and competitive platform for further study and development

on intangible management, and advance important functions to forensic science. KM did

create a platform for professional selling rather than defending the decision science and

predictability strategic option of KM practice. Is knowledge science (KS) a product

portfolio that management is unwilling (failed to accept or rejects) to consider? Other

normative value theory conceptions that can be used for further study and research could

relate to social justice theory by rule of law and right (administered by justice). Can a

science of public administration deliver the ends on public sector activities, in reality of

New Public Management (NPM)? Is value theory by business markets or industries

conceived cooperation a rational choice, or rational action of just institutions (fair, evenhanded, unbiased) arbitrarily reflecting merely different values?

Engaging historical literature and analyzing termed peer-review articles as a result to devising, expanding and extending knowledge management practice, concludes that the current knowledge management platform is unstable, and that more studies should explore the knowledge science concept to devise, extend, or build more appropos field theory and practice.

Summary

Knowledge production toward a knowledge science is limited; *The Trilogy of Science: Filling the Knowledge Management Gap with Knowledge Science and Theory* informs management on the value and distinguishing features of knowledge intensive business service (KIBs). A value providing new vision, improves education, and serves to

1. Engage intangibles and adding to stock of what is known

2. Promise interests to create a state of knowing

3. Provide solutions

4. Train practitioner and applied professionals

5. Produce more value

Problems in practice derives our systems goal; our systems goal on improving practice creates knowledge management activities (KAT) which impact business (KMKS), return on investment (ROI), and develops intangible quality by trained disciplinary scholar-practitioners (KIBs).

Conclusions

The conclusion I draw is academic peer-reviewed practitioner explanatory and advisory power has not shifted nor inflected from descriptive to normative frame of mind, or way of thinking. Although I am in the grip of this normative applied management and decision science (AMDS) thought, knowledge science is an issue of a process of practical reasoning; reasoning that hold evident and causally connect knowledge activity theory (KAT) to this web of thought. I believe the role KAT set up is authority to speak to the philosophy and science of knowledge as knowology: the idea of a universal means made explicit. Perhaps by way of knowology and KAT change in professional mindset will lead to intuitive innovation, self-governing policies, a more grounded normative— descriptive—prescriptive empirical KAT, a scaled-balance to forensic knowledge management knowledge science (KMKS), and a full information approach to rationality and practicality advancing a consumatory scholarship. When I take my commitment to scholarship as conferred, the forensic knowledge science platform will be fully anchored and grounded appropriately by *Anercomp* (KIB—Sole Practice), which impart stability and capacity for change, and in this means of valuing cannot be held in one's view that there's nothing good or no one committed to advancing KMKS value-in-use and use-value.

This cited trilogy is grounded in transdisciplinarity and a reasonable stability of authoritative practice derived value-in-use making change of prior general consideration value by way of the practice derived knowledge activity theory (KAT).

Concluding Remarks

Knowledge science is the bridge from knowledge management as business (IT engaged) discipline to knowledge management as a philosophy and scholarly-practice doing applied management and decision science as a forensic science (KMKS), and applying the research on an intelligence paradigm/platform as specialized-specific know-how.

Knowledge science is a critical synergistic capacity and synthesis having objective rationality of production management, and construction of learning, knowing and doing; a highly complex natural process transforming systematized value, rules, equity, and equality in a human phenomenology strategic context.

Knowledge management must accept the view that managed information system derive and develop information; the hybrid nature of artificial science (man-machine systems concept), which aforementioned caused difficulties of disentangling prescription from description bypasses humanities value-in-use and use-value that transforms information on how human behavior, human thought and human interaction addresses and develops action as practical knowledge and intelligence. Meta-analysis presented *knowology* as having that relevant interdisciplinary applied practice of knowledge science.

I want you the reader to

- Use your mind's eye to examine the nature of this design and practice toward a unified autonomy and empirical law(s)

- Develop the cognitive domain of knowledge activity theory (KAT) and the basic disciplinary ACE method (analysis, comparison and evaluation) and framework for forensic knowledge science

- Build a forensic knowledge science community of practice (CoP) whose conduct is basic and applied research

- Explore service (systems) as actionable information toward developing service activity theory and philosophy of the mind to comprehend logic, semantic, and the element reasoning of the triadic relationship

The method in which we acquire knowledge comes back to activities; self-checks built in researching are constructs of self-knowledge or secured knowledge process. Information-intensity practice has an inherent quality as secure knowledge optimizing field contributions. One must accept tacit knowledge is an acquired knowledge all in itself, and not an antecedent or interplay of explicit knowledge. KAT explain and predict social and human phenomena; social psychology is applicable to investigating natural condition use-value and value-in-use (act now processes). This epistemology frame and center scientific method (ACE) as the practice derived understanding of knowledge management knowledge science (KMKS) platform.

Actions in applied management and decision science (AMDS) have distinct epistemic application. Knowledge science (KS) as a forensic science purport a new epistemology of practice establishing method and rule of evidence and inference can guide policy making, and build a new bridge between managers and academics.

Recurrent Field Inquiries

What does a Knowledge Managment (KM) Practitioner do?

Knowledge Management Practitioner study knowledge routines: a management paradigm for continuous dynamic repurposed business intelligence, which enables best-in-class enterprise operation research and management.

Knowledge Management Practitioner repurposes an operation: serving as business partner; systems thinker/investigator/analyst; wise councilor and advisor of Knowledge & Learning Management (KLM) structures; developer of knowledge sharing culture and continuous learning; prosumer of scholarly-writings; advocate; your outsourced Chief-- CKO, CEO, COO!

What is KM?

Knowledge Management is a surprising mix of strategies, tools, and techniques that have emerged from decision science. An interdisciplinarity, rooted and drawing upon the study of decision making from psychology, economics, law, political science, philosophy, business, education, and social and humanistic disciplines.

Knowledge Management is a transdisciplinary field consisting of: operation management, learning management, social science, language science, and theories of decision, management, information, and organization, while making direct connection and use of an enterprise's intellectual assets, by recognizing functional intelligence to transform people, process, and practices.

What will KM do for my organization?

Knowledge Management represents an approach to the full utilization of KM flow controls: process of knowing, facilitating, generating, transferring, and transforming people, practice and technology by studying use-value and value-in-use.

Knowledge Management is the study of knowledge routines: a management paradigm for continuous dynamic repurposed business intelligence, which enables best-in-class enterprise operation research and management.

Provide service operation that will tactically secure and ensure the scope of business services responds to the individual, and/or establishment needs; reinforcing core business values and service exclusivity. Your Business Specialist!

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Appendix

Appendix A: Knowledge Management Hindsight Timeline (legal landscape)

http://www.entovation.com/timeline/timeline.htm
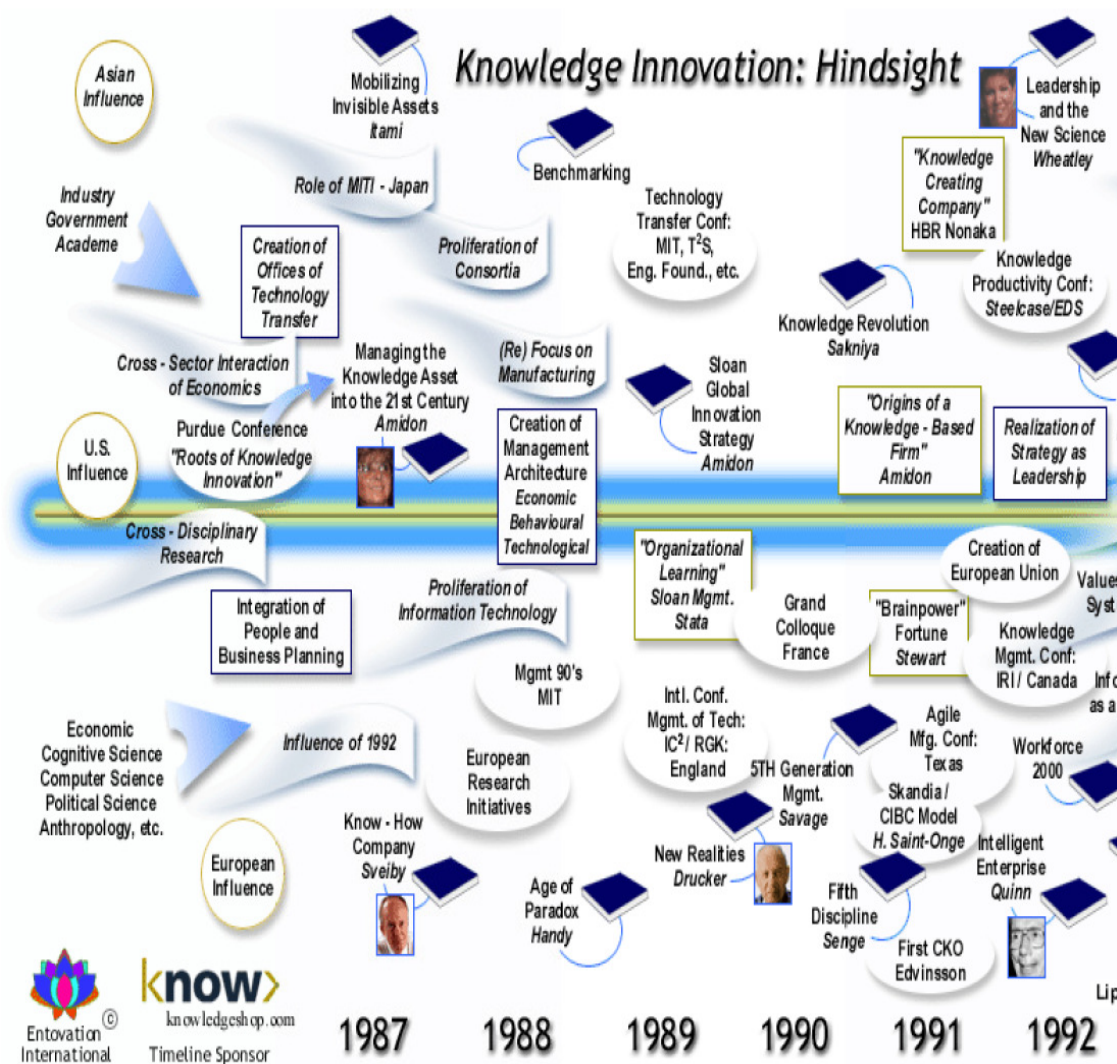
Appendix B: Knowledge Management Insight Timeline (legal landscape)

http://www.entovation.com/timeline/timeline.htm
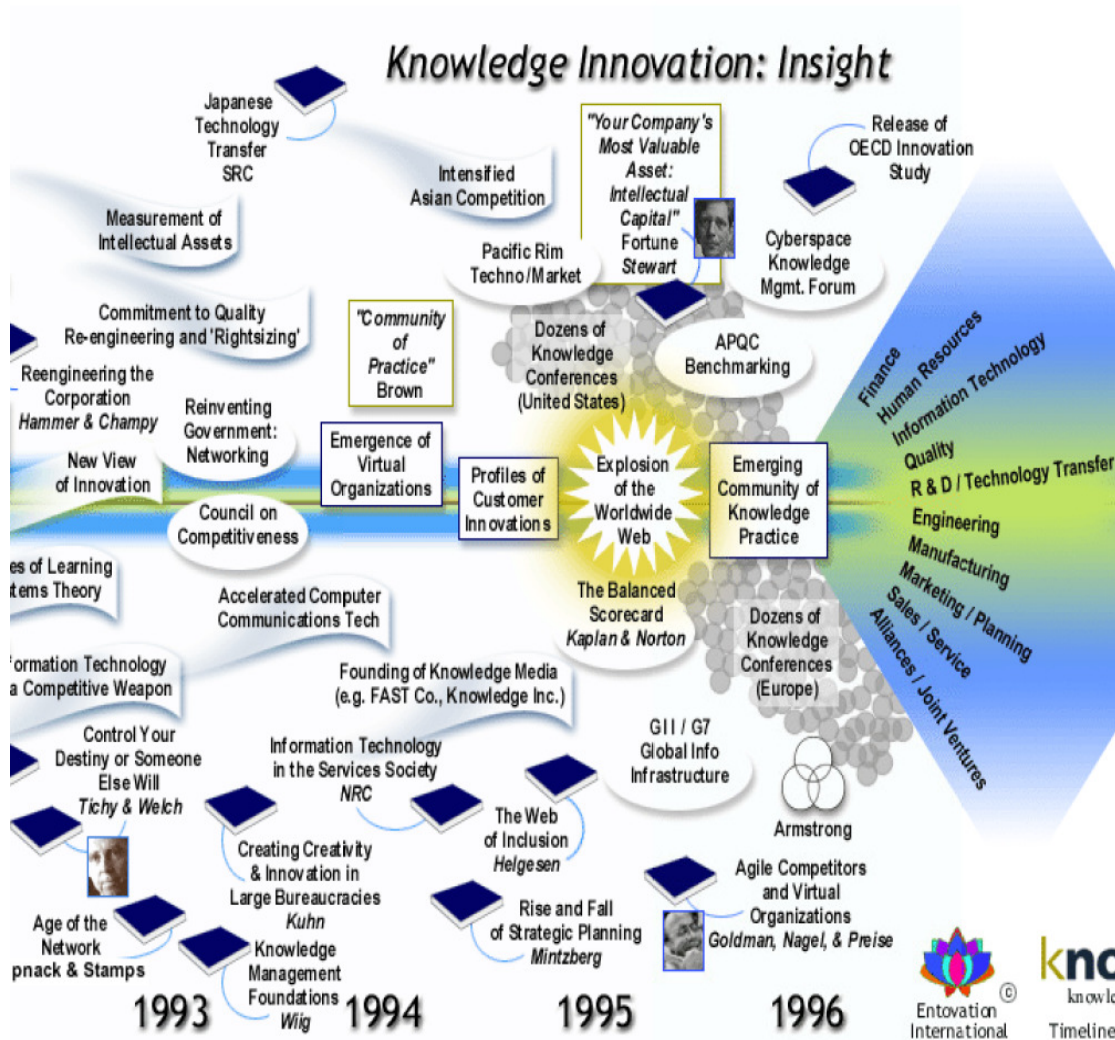
Appendix C: Knowledge Management Foresight Timeline (legal landscape)

http://www.entovation.com/timeline/timeline.htm
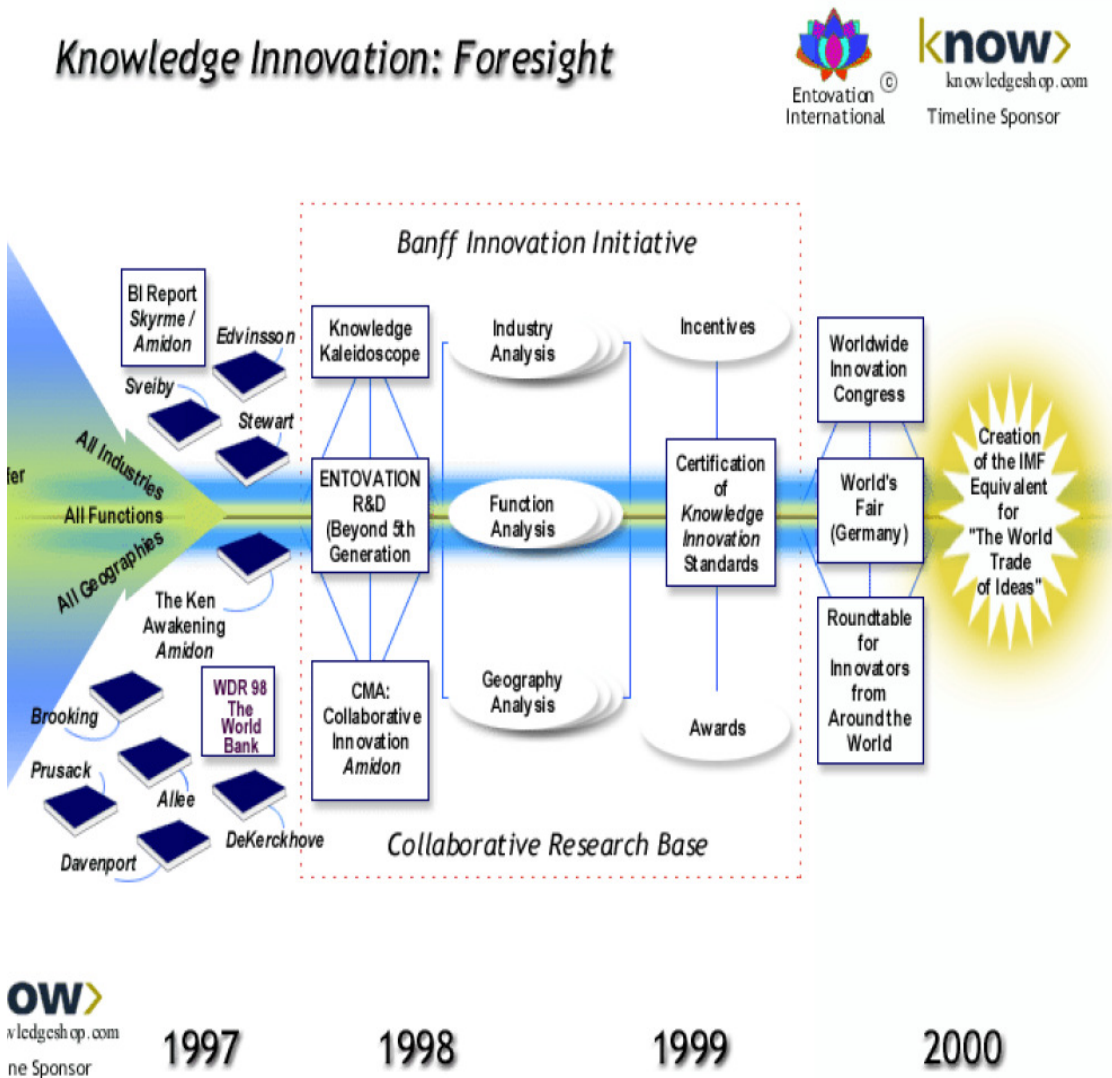
Appendix D: Data Analysis Code Book

CODE BOOK
The ultimate goal is to detect and code regularities, variations and singularities

Field Mechanism(s) (KW*)	Authors (AU)	CODES	OGF (Ordinary Generating Function Variables)	Theoretical References
Social Science (TRD)	Male	ScS	ScS(P), ScS(E), ScS(L), ScS(DM)	Administrative (ADM)
Service Science (APD)	Female	SvS	SvS(P), SvS(E), SvS(L), SvS(DM)	Learning (LRN)
Systems Science (APD)	Race	SyS	SyS(P), SyS(E), SyS(L), SyS(DM)	Organizational (ORG)
	Age			Decision (DT)
			(P)roduction	Knowledge (KNL)
Data Mechanism(s) (KW*)	**Audience (AD)**		(E)nvironment	Management (MGT)
Knowledge Science	Researchers		(L)abor	Information (IT)
Knowledge Management	Practitioners		(DM)Decision-Maker	Utility Function (UFT)
Decision Science	Policy-Makers			Decision Field (DFT)
Interdisciplinarity	Executives			Psychological (PT)
Transdisciplinarity	Academia			

Subjective Booleans (SB)   (main ideas: what is it? Or what can it be?) **Explore and Interpret**

Delimiters (DL)			
Time	service industries	information management	decision making
Peer Reviewed	knowledge management	innovation management	sociology
Business & Mgt. Discipline	forensic science	learning	grounded theory
Pyschology Discipline	cognitive science	education	
Service Science Discipline	management	theory	
	science education	conceptual structures (information theory)	

Journal(s) (SO)

	Classification Codes	Database(s)
Academy of Management Journal (R,E)	(R)efereed 2225, 2227, 2260, 2300, 2340, 2343	Academic Search Complete
Journal of Knowledge Management (R,E)	(E)lectronic 2390, 2420, 2440, 2520, 2560, 2630	Business Source Complete
Electronic Journal of Knowledge Management (R,E)	2840, 3000, 3143, 3410, 3500, 3510	PsychARTICLES
Knowledge Management for Development Journal (R,E)	3550, 3640, 3660, 4200	SocINDEX
Journal of Service Science (R,E)		Thoreau:MultiDatabase Search
Journal of Service Science Research (R,E)		
Global Business & Management Research: An Int'l Journal (R,E)		
Journal of Knowledge Management, Economics & Information Technology (R,E)		
See References for a complete listing		

Disciplinary Elements

D^1-Level (observational data language)   Pearson Probability Description
D^2-Level (comprehensive explanation)   Bayesian Likelihood Meaning
H-Level (psychological constructs and models)   Hypothetical Language
M-Level (philosophical presuppositions)   Theoretical-Constructive Arguments

Knowledge Repositories

K^e (external knowledge)   Individual Level
K^{si} (structured internal knowledge)   Group & Organizational Level(s)
K^{ii} (informal internal knowledge)

Notes:

Knowledge science can be the *know what* of knowledge management, which impacts knowledge management performance in delivering *know how*

"Science can never tell you what to do in class or at work"

Four knowledge management processes (internalization, externalization, socialization and combination)
Individual Level, Group & Organizational Level(s): Reciprocity/Gift-Giving Principles

2225 Neuropsychological Assessment	2520 Neuropsychology & Neurology	3550 Academic Learning & Achievement
2227 Educational Measurement	2560 Psychophysiology	3640 Management & Management Training
2260 Research Methods & Experimental Design	2630 Philosophy	3660 Organizational Behavior
2300 Human Experimental	2840 Psychosocial & Personality Development	4200 Forensic Psychology & Legal Issues
2340 Cognitive Processes	3000 Social Psychology	
2343 Learning & Memory	3143 Pyschoanalytic Theory	
2390 Parapsychology	3410 Professional Education & Training	
2420 Learning & Motivation	3500 Educational Psychology	
2440 Social & Instinctive Behavior	3510 Educational Administration & Personnel	

Appendix E: Copyright Permission Request

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by Google

Anthony Bates <anthony.bates@waldenu.edu>

Copyright Permission Request: Entovation International, Ltd.

1 message

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Cc: samit@deltagraphixs.com
Bcc: anthonybates@anercomp.biz, Judith Forbes <judith.forbes@waldenu.edu>, Judie Forbes <drjudie@msn.com>

To: Entovation International, Ltd. - **Debra Amidon** (debra@entovation.com)
Cc: Delta Graphixs (samit@deltagraphixs.com)
From: Anthony S. Bates (anthony.bates@waldenu.edu)

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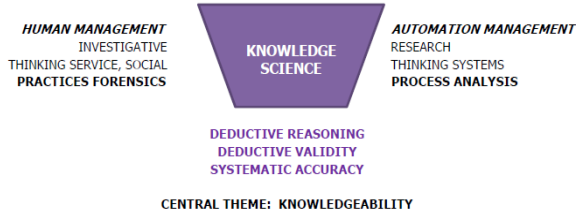URL: http://www.entovation.com/timeline/timeline.htm

Respectfully,

Anthony S. Bates, Doctoral Candidate
Walden University, College of Management & Technology

Appendix F: Logic Models for Knowledge Activity Theory (KAT)

Appendix G: Five-Year Comparative Examination of Practice Derived Themes

MULTIDISCIPLINARY LITERATURE CENTRAL THEMES (2016-2011)

Year																		
2016			Practices	Study	Work	Management	Learning	Sharing	Knowledge	Process	Model	Research	Information					
2015	Study	Social	effective	Approach	Service	Management	Work	Decision	Team	Knowledge	Process	Innovation	Information	model	System	Product	analysis	data
2014						Management	Learning		Knowledge	Process	Research							
2013						Management	Service	Training	Learning	Knowledge	Process	Research						
2012						Management		Assets	Knowledge	Innovation	Systems	Information						
2011								Management	Knowledge	Process								

HUMAN MANAGEMENT
INVESTIGATIVE
THINKING SERVICE, SOCIAL
PRACTICES FORENSICS

KNOWLEDGE SCIENCE

AUTOMATION MANAGEMENT
RESEARCH
THINKING SYSTEMS
PROCESS ANALYSIS

DEDUCTIVE REASONING
DEDUCTIVE VALIDITY
SYSTEMATIC ACCURACY

CENTRAL THEME: KNOWLEDGEABILITY

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Completion/Publication

Year of Completion: 2017

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  Domiciled in: United States
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