Master Thesis in Informatics

Reviewing Interpretive Approaches for Evaluation of Information Systems Investments

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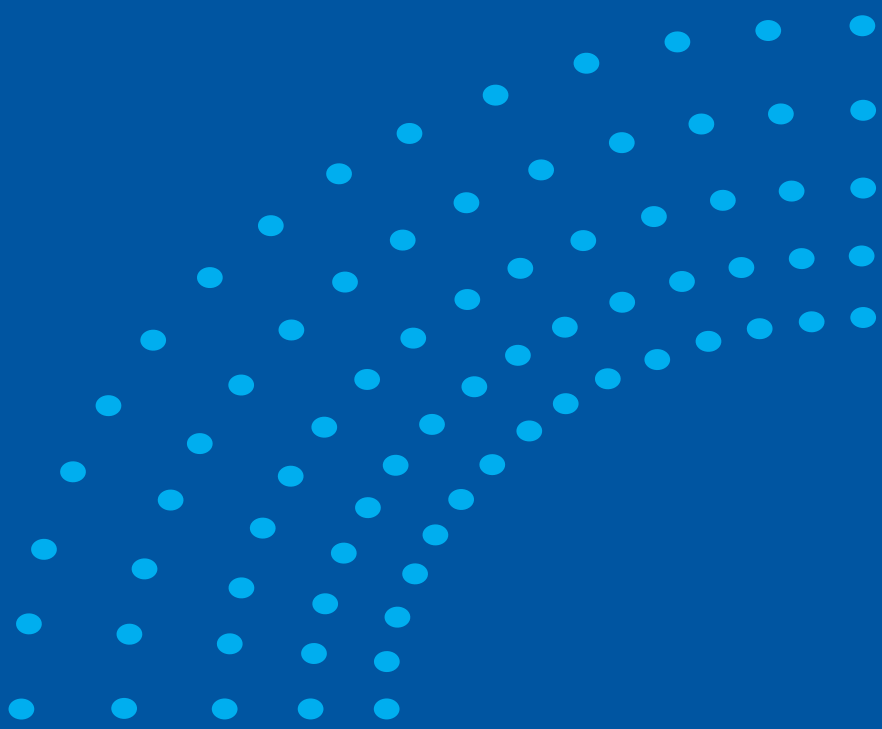CHALMERS | GÖTEBORGS UNIVERSITET

Business Technology

Reviewing Interpretive Approaches for Evaluation of Information Systems Investments:

A literature review of central concepts

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Abstract

As information systems/technologies (IS/IT) become embedded in organizations, these systems cannot be isolated from important issues such as human intellect, culture, philosophy, politics and socio-organizational changes. Limited business resources on one hand and the various concerns and demands from different stakeholders on the other hand have led to an ever-growing need to evaluate IS/IT investments. In other words, due to the heavy rise of IS/IT costs IS/IT investments must be justified. Evaluation of IS/IT investments is generally taken to mean the identification and the measurement of capital expenditures spent on and the initial anticipated revenues gained from the deployments of these systems (IS/IT).

Based on a large body of IS/IT evaluation literature, there exists a plethora of diverse, mostly financial, evaluation approaches proposed to be used for evaluation of IS/IT investments. But there has long been dissatisfaction with these traditional evaluation approaches argued to not capture the intangible business benefits of IS/IT investments. The underlying positivistic paradigm on which much of the traditional IS/IT evaluation has been carried out is believed not to take into account the pluralistic nature of IS/IT and is therefore an inappropriate basis on which to address particularly a variety of social outcomes generated by IS/IT investments.

This literature review reports that the calls for interpretive evaluation approach (IEA) that incorporates the recognition of IS/IT as socio-technological entities have increased since the beginning of 1990s. Many interpretive IS/IT evaluation authors argue that the prevailing financial approaches and thus their related evaluation methodologies fail to consider IS/IT as complex multi-faceted socio-technological entities. This master's thesis concludes that evaluation is always a political process, with differing interests, priorities and consequences. The main objective of this thesis has been to explore the basic philosophical assumptions and some key theoretical concepts underpinned IEA.

It is widely recognized that utilization of IEA will allow and thus encourage stakeholders to be involved in the whole evaluation process. IEA emphasizes the distinctive constructions created by different group of stakeholders must be valued and taken into account through an interative negotiation process in order to achieve maximum value from and legitimatize evaluation. This will enrich both evaluators and stakeholders' different interpretations and understandings of deployments of IS/IT, and also raise their awareness of the multifaceted complex task of IS/IT evaluation.

One of the main fundamental characteristics of interpretive approach (IA) is to highlight and facilitate evaluation as an interative learning process. Interpretive approach concentrates on the lifecycle perspective of IS/IT investments argued to be a complex managerial issue. Interpretive IS/IT evaluation authors argue that one of the logical rationale reasons behind the use of IEA is its ability to address the intangible business benefits or social outcomes of IS/IT investments. Moreover, it is crucial to notice that stakeholders, their claims, concerns and issues are at the core of IEA. This master's thesis can also conclude that there is consensus about the interpretive contextual framework termed CCP (i.e., content, context and process). This interpretive contextual IS/IT evaluation framework has been used by many interpretive IS/IT evaluation papers for evaluation of IS/IT investments but needs to be further developed. As a contribution to the interpretive IS/IT evaluation discourse, this thesis suggests a set of three interrelated factors aimed at determining success or failure of conducting effectively IEA.

Keywords: *Evaluation, IS/IT evaluation, Fourth generation evaluation, Interpretive evaluation approach, Interpretive inquiry, Interpretive paradigm, Interpretive research, Stakeholders, Contextual evaluation framework, CCP, IS/IT investments, Information systems*

DEDICATION

For my late parents (Dayeh and Dadeh) who are always in my mind.

ACKNOWLEDGEMENTS

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Said Morad Babaheidari

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Table of contents

Tables

Figures

CHAPTER 1: INTRODUCTION

This chapter will be dedicated entirely to a brief presentation of the framework of this master's thesis. It will shortly introduce and thus explain the philosophical and theoretical rationales behind the use of interpretive evaluation approach examined extensively throughout this paper. The research objective and questions (see Section 1.2) followed by the organization of this paper is set out later in this chapter (see Section 1. 3).

1.1 BACKGROUND AND THE THESIS DOMAIN

There has long been dissatisfaction with the traditional evaluation approaches argued to not capture the intangible business benefits of information systems/technologies investments (e.g., Symons, 1991; Ward and Daniel, 2006; Barrow and Mayhew, 2000). The underlying positivistic paradigm (Goles and Hirschheim, 1999) on which much of the traditional information systems/technologies evaluation has been carried out is believed not to take into account the pluralistic nature of information systems/technologies and is therefore an inappropriate basis on which to evaluate particularly the various social outcomes of information systems/technologies investments (Serafeimidis and Smithson, 1996; 1999; Walsham, 2006). The traditional formal-rational approaches to information systems/technologies (hereafter referred to as IS/IT) evaluation are usually drawn on the financial criteria that presupposes that the business benefits generated from IS/IT investments must be measured in financial metrics. But many authors such as Ward and Daniel (2004) argue that this is not an easy task because to measure the intangible or social outcomes of IS/IT investments in financial metrics are always problematic. Financial IS/IT evaluation approaches and their associated methodologies listed by Renkema and Berghout (1997) capture only tangible benefits of IS/IT investments and have shown not to be successful (Symons, 1991) as their proponents initially claimed (Guba and Lincoln, 1989).

However, evaluation of IS/IT investments is generally taken to mean the identification and the measurement of capital expenditures spent on and the initial anticipated revenues gained from the deployments of information systems (Symons, 1991; Ballentine et al. 1999). IS/IT evaluation as a field or profession has been particularly targeted for considerably highly critical discussions and debates (Ngwenyama and Ojelanki, 2002) such as the notion of "IS Business Value" which lacks the consensus of value (Cronk and Fitzgerald, 1999), or e.g., the notion of inherent duality of technology (i.e., the embedded-interaction and interrelationship between both technology and people), and consequently the emergence of the widely recognized socio-organizational relationship characterized as a challengeable managerial issue (Orlikowski, 1992). This new reality postulates evaluation as a complex social process (e.g., Walsham 1995; Jones and Hughes, 2001) which is information-intensive (e.g., Serafeimidis and Smithson 1999).

Symons (1991) argues any IS/IT evaluation faces both conceptual and organizational difficulties. Based on the Contextualism of Pettigrew (1990), Symons and some other IS/IT researchers have adopted a contextual framework termed CCP (i.e., Content, Context and Process) to conduct interpretive approach in different IS/IT research or evaluation cases. The works of these authors along with the conceptual and organizational rationales behind the use of interpretive evaluation approach (hereafter referred to as IEA) will be reviewed later in the subsequent chapters.

It is widely recognized that the traditional approaches and their various evaluation methodologies measure only the financial or tangible business benefits/outcomes of IS/IT

investments. These evaluation approaches and their various associated methodologies fail to consider and capture the intangible business benefits/outcomes (e.g., Symons, 1991, Jones and Hughes, 1991) of IS/IT investments. Whereas, IEA recognizes and considers IS/IT to be socio-technological entities exhibiting a series of complex and important interrelated issues (e.g., Symons, 1991; Walsham, 1995).

Guba and Lincoln (1989) have termed interpretive approach "fourth generation evaluation". Similarly, Rebien (1996) has also discussed interpretative approach as Fourth Generation Evaluation defined as: an interpretative approach to evaluation based on and guided by issues identified by stakeholder. The evaluation gap in information systems evaluation will be closed due to the list of advantages of interpretive approach which all support the premise, meaning closing the evaluation (Guba and Lincoln, 1989; Tashakkori and Teddlie, 1998). For example, they argue one main characteristic of interpretative approach is the constant and active involvement of stakeholders.

However, the calls for interpretive evaluation approach (IEA) that incorporates the recognition of information systems/technologies (IS/IT) as socio-technological entities have increased since the beginning of 1990s (e.g., Stockdale and Standing, 2006; Berghout and Remenyi, 2005). Walsham (2006) argues, in the existing IS/IT evaluation literature there are many arguments advocating the use of interpretive approach in IS/IT research. The importance of conducting IEA in the IS/IT evaluation field is widely discussed and viewed to be an effective evaluation approach thought to capture many complex social issues (e.g., Frisk, 2004). According to Serafeimidis and Smithson (1999), interpretive approach is appropriate to both utilizations and thus evaluation of IS/IT investments. An early paper by Serafeimidis and Smithson (1996) discusses the involvement of a wide range of stakeholder groups considered to be essential to interpretive evaluation approach (IEA).

Interpretative IS/IT evaluation articles incorporate the socio-organizational aspects (Orlikowski, 2002) of IS/IT investments and thus address intangible/soft benefits or social outcomes of these investments. Meanwhile, it is true that these interpretative evaluation papers deal with the interpretive approach differently, and the theoretical findings or contributions vary from case to case (Walsham, 2006). As it will be discussed later in this paper, none of the IS/IT interpretive authors alone covers all aspects of IEA. Depending on the author's research subject or case, each paper addresses some aspects, philosophically and theoretically, of IEA and thereafter leaves the other aspects untouched (Walsham, 2006).

This master's thesis is a theoretical paper concerned with evaluation of information systems/information technologies (IS/IT) investments. This paper will review mostly IS/IT-centric evaluation literature aimed to study the underlying philosophical assumptions and key theoretical concepts of interpretive evaluation approach (IEA).

Based on interpretive IS/IT evaluation literature, this paper will also investigate if there are any consensuses about key concepts of IEA. To conduct this thesis, I shall study interpretive evaluation approach (IEA) from three different and at the same time interrelated and important perspectives or research fields outlined below:

1) *Literature in the evaluation field/discipline (e.g., the work of Guba and Lincoln)*

2) *Literature in IS/IT research discipline (e.g., the work of Walsham and Klein and Myers)*

3) *Literature in IS/IT evaluation field (e.g., the work by Symons and Jones and Hughes)*

Drawn on above mentioned three research discourses, this paper will finally discuss (see Chapter 6) the obtained findings followed by the conclusion of the thesis results set out in Chapter 7.

1.2 RESEARCH PURPOSE AND QUESTIONS

The main objective of this master's thesis is to study the following two research questions:

- What are the key concepts of interpretive IS/IT evaluation approach (IEA)?
- How are these concepts described?

1.3 DISPOSITION

This section describes the logical structure of this paper. It is composed of seven Chapters organized as follows. Starting from this introduction chapter, Chapter 2 is dedicated to the research method of this thesis. It describes in detailed how the literature search, which is drawn on the grounded theory, has been carried out along with a short introduction to the utilized interpretive/hermeneutic research method and the logical rationale behind its use for conducting this thesis.

Chapter 3, this chapter drawn heavily on the valuable work of two well-cited authors (Guba and Lincoln, 1989) is dedicated to an extensive treatment of interpretive approach. It will explore the main underlying philosophical assumptions and key theoretical concepts of constructivist paradigm which is based on hermeneutics/interpretive approach. This Chapter deals with a mosaic of diverse important concepts, some key aspects associated with the evaluation in general such as consideration of the complex and multifaceted task of evaluation seen as a social complex issue with social and organizational consequences. In this Chapter, the logical rationale behind the changing methodological paradigm and the arguments for utilization of interpretive approach as the most effective evaluation approaches for evaluation of IS/IT investments discussed latterly in subsequent Chapters (see Chapter, 4, 5 and 6) will be reviewed.

Chapter 4, this Chapter reviews some interpretive papers within the IS/IT research or inquiry discourse. In this Chapter, it will be examined how interpretive approach has been interpreted and discussed by IS/IT researchers such as Walsham. Additionally, this chapter sets out a set of seven principles to do the interpretive field research.

Chapter 5, this chapter will be dedicated to an in-depth examination of interpretive IS/IT-centric evaluation literature aimed at investigating the main concepts of interpretive approach for evaluation of IS/IT investments. Chapter 6, it will critically discuss the presented literature review or findings of this thesis. Chapter 7, in this chapter I will conclude the obtained results of this thesis and also I suggest the further development of the widely used contextual evaluation framework called CCP (i.e., Content, Context and Process) in combination with my recommendation to use the evaluation methodology shown in Chapter 6 of this paper for conducting interpretive approach for evaluation of IS/IT investments.

CHAPTER 2: THE RESEARCH METHOD

This chapter describes the paper's research method. A research method should describe in detailed how the work has been carried out. In the case of this paper, which is a literature review, I shall describe the choice of specific procedures used to gather and analyze research data aimed to address and thus answer the research questions of this master's thesis.

2. 1 THE LITERATURE SEARCH

I've systematically searched for both reference and IS/IT publications in order to find articles relevant to the topic of interpretive evaluation approach (IEA). The primary focus has been on formal material which includes books from recognized academic publishers (for example, SAGE Publications), articles published in refereed academic journals, conference papers and theses. Two specific services that enabled me to take such literature search are the online libraries of the University of Gothenburg and of the University of Chalmers, particularly their bibliographical databases that index academic journals and conference proceedings. These online libraries have subscribed to a range of online full-text databases which make it possible to search for full-text journals by subject.

In the case of this paper, I chose full-text databases under the link "Informatics". Some of these full-text databases are, ACM, Emerald Insight, JSTOR, SAGE Journals Online, Science Direct, SpringerLINK, and Taylor and Francis. Once entering these full-text databases, they provide access to full-text IS/IT Journals such as EJIS (The European Journal of Information Systems), EJISE (The European Journal of Information Systems Evaluation) and other related publications. The technique that I have used to find relevant literature will be detailed below:

- In the beginning of this study, I received some articles from my supervisors. These articles in turn guided me to some other articles. This in turn has led me to more references, an interactive process that indeed never ends. But I had to make my choices, because this thesis is time dependent and with limited resources.
- I have searched for articles by entering keyword, the author's name, subject, ISBN, a short or long sentence.
- After finding e.g., an article, the process was to check its relevancy to my work. This is because databases cannot do this job. A great number of those articles that I searched via databases and thus examined had more or less discussed the topic of this thesis but in other contexts than this thesis. However, the hermeneutic approach which is at the core of grounded theory raised my awareness and thus enriched my understanding in order to learn how to search and how to study those articles. It can be concluded here that literature search is an interative process which allows, in the case of this paper, me to reconsider other search techniques and to modify the findings of this thesis. As it will be described in section 2.3 below, grounded theory argues researcher should not know in advance what he or she does not know. But it does not mean researcher should forget what he or she knows at the beginning of the project. Meaning, the researcher has a sense of idea about the study subject and this cannot be ignored.

2.2 THE LOGICAL STRUCTURE OF HOW TO CARRY OUT THIS MASTER'S THESIS

Figure 1 below shows the logical structure of how this master's thesis is carried out. As it s seen, to conduct this thesis, there are a set of five steps that describe the logical process of how the literature review is carried out along with a set of three phases that indicate the process or the plan for conducting the thesis work. In phase 1, after the thesis's proposal is discussed and agreed upon by in this case the author of this paper and his supervisors, the author starts the work process which shown in figure 1 below. In the following section there will be a short introduction to the Grounded Theory and the rationale behind its use in this paper.

The Logical Structure of How to Carry Out this Master's Thesis

The logical Process of Literature Review

Phase 1

Discussing the Thesis Proposal

Feedback from Supervisors

Reporting and Delivering the Thesis by the Sudent

Supervisor 1   Supervisor 2

Supervising the project by and the Feedback from Supervisors

Student

Step 1
Problem Formulation

Step 2
Literature Search

Phase 2
Studying the Research Question
Using the Grounded Theory for Carring out this Master's Thesis

Phase 3

The Iterative work process

Step 3
Data Evaluation

Using the Grounded Theory for Conducting this Master's Thesis

Compare Critically

Step 4
Analysis and Interpretation

Step 5

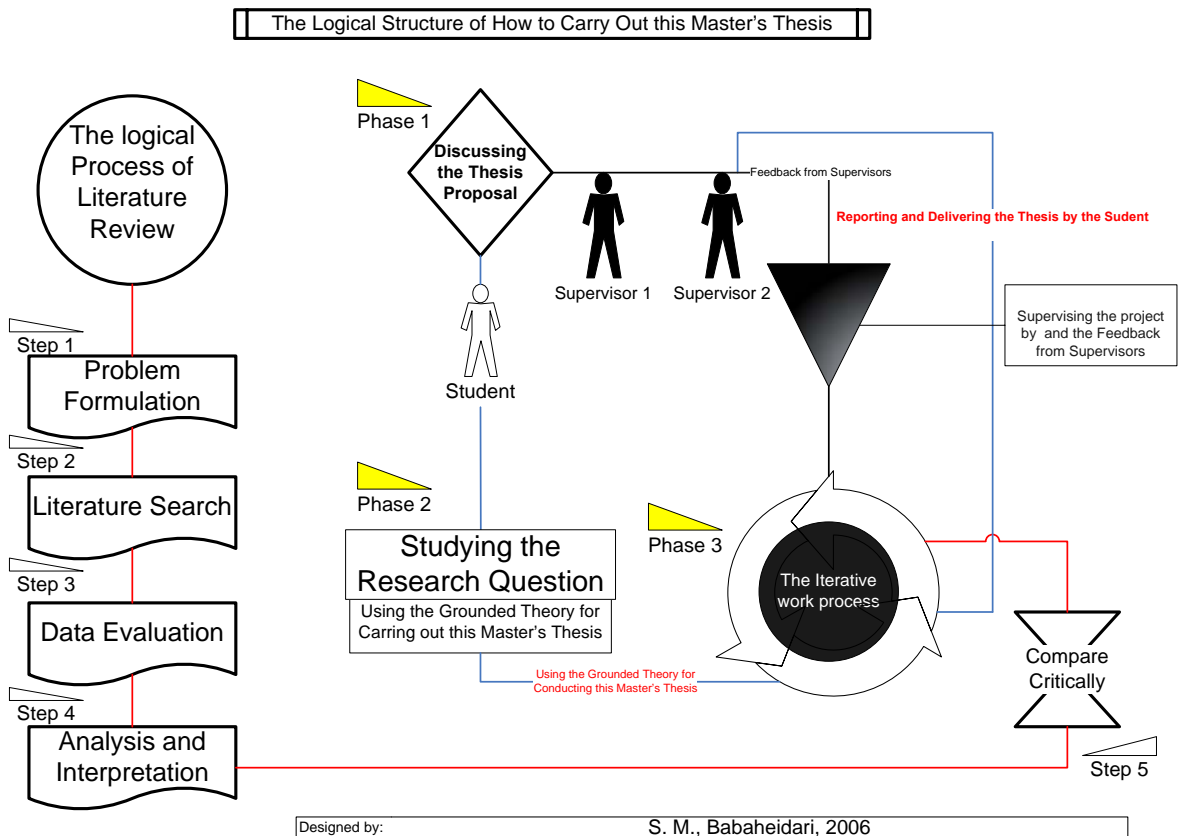Designed by: S. M., Babaheidari, 2006

FIGURE 1: THE LOGOCAL STRUCTURE OF HOW TO CARRY OUT THIS MASTRE'S THESIS

2.3 A SHORT INTRODUCTION TO THE GROUNDED THEORY AND THE RATIONALE BEHIND ITS USE IN THIS PAPER

Avison and Pries-Heje (2005, p. 218) write, "The research method is the way it is described to carry out the research." These authors note that research methods are either quantitative or qualitative with their respective various techniques for data collection. Moreover, knowing that there are many quantitative as well as qualitative research methods (Avison and Pries-Heje, 2005), I have thus decided to use grounded theory as this paper's research method which indeed is hermeneutic or interpretive in nature. But before moving forward to explain why and particularly describe how I have used the grounded theory to conduct my literature study, I will briefly review the grounded theory as follows.

Given that all research whether quantitative or qualitative (Fossey et al., 2002) has its underlying conceptual logic and the methodologies' suggested procedures, the grounded theory developed by Glaser and Strauss (1967) has been interpreted and used differently by researchers across multidisciplinary research fields. The major difference between grounded theory and other research methods is widely described to be its specific approach to theory development (e.g., Avison and Pries-Heje, 2005). Grounded theory emphasizes on continuous interplay between data collection and analysis (ibid). Avison and Pries-Heje (p. 257) then continue to argue that, "Grounded theory approaches are becoming increasingly common in the IS research literature because the method is extremely useful in developing context-based, process-oriented descriptions and explanations of the phenomenon under study."

Grounded theory contains methodological guidelines, advices, and perspectives to be used for analyzing processes (Charmaz, 2006). It is a general methodology designed and developed to generate theory that is derived or grounded in systematically collection and analyzing of data (Strauss and Corbin, 1999).

With grounded theory methods, the researcher gains rich data that emerges continuously during the conduction of the process and thus allowing him/her to shape and reshape data collection and finally to refine the collected data as Charmaz stated. Grounded theory focuses on the multiple actors' perspective and analytic interpretations (Strauss and Corbin, 1999). In quantitative research, however, the researcher first builds a hypothesis, one theory that is not tested yet, and tests it later. Whereas, in grounded theory the cognitive process is quite in opposite direction (ibid).

According to the founders of the grounded theory (i.e., Glaser and Strauss, 1967) the researcher is not setting any pre-condition or there are not preconceived hypotheses in mind when the project starts. It is only after data collection based on observations the researcher will know which proper theory has been generated. In addition, the researcher is allowed to continuously modify the derived theory. In other words, to explore the true nature of an object there is no need for any hypothesis to be conducted in advance Charmaz (2006).

However, Glaser and Strauss criticized the dominated quantitative research approach because they argued that there is no scientific value in and unity between the pre-constructed hypothesis and the empiric that together generate a theory, if not many. This means the studied reality produces its own theory, not the hypothesis imposed on the object of research. Glaser and Strauss called the classic mainstream approach "groundless theory" because, as indicated above,

they claimed there is no credibility in the theory derived from a purposeful and ungrounded hypothesis.

The grounded theory is also applicable when studying and reviewing in this case previous IS/IT evaluation literature. The grounded theory has a diverse application and can be modified by using different techniques that best suit the research field as it will be the case with my literature study. The only fundamental aspect is to ensure the theory derived is 'grounded' in the data. Theory derived from data is more likely to resemble 'reality' or 'the object' then purring together a set of theoretical conceptions whether based on prior experiences or speculations (Charmaz, 2006). This is actually the essence of hermeneutic or interpretive approach that will be examined extensively in Chapter 3 and Chapter 4 in this paper.

As said previously, I will conduct my literature research based on the grounded theory as an alternative research method which in my knowledge best suits and should facilitate, effectively, the research questions of this master's thesis. As Charmaz (2006) writes, "How do we synthesize hundreds of pages of interviews, fieldnotes, documents, and other texts to develop a grounded theory?" Charmaz emphasizes (2006, p. 43) on the concept of coding in grounded theory practice defined as, "Coding means categorizing segments of data with a short name that simultaneously summarizes and accounts for each piece of data. Your codes show how you select, separate, and sort data to begin an analytic accounting of them." The grounded theory allows constantly delving into the free zone of literature, and simultaneously considering and reconsidering merging understandings of key intellectual concepts and philosophical assumptions that apparently have been treated variously by different literatures.

CHAPTER 3: INTERPRETIVE APPROACH FOR EVALUATION IN GENERAL

This Chapter is comprised of four Sections. Section 3.1, it deals with some common definitions and purposes of IS/IT evaluation and the difference between basic scientific research and evaluation program. Thereafter, in section 3.2, the logical rationale behind the paradigm shift or the emergence of interpretive approach termed and developed by two well-cited authors Guba and Lincoln (1989) as 'Fourth Generation Evaluation' will be explored. In section 3.3 the underlying fundamental philosophical assumptions and the main theoretical concepts of interpretive approach (IA) for evaluation in general will be reviewed extensively. Thus, this will help to enhance the awareness and enriching the understanding of interpretive evaluation approach (IEA) examined later in the subsequent Chapters (see Chapters 4 and 5). Finally, Section 3.4 will deal with the emergence of interpretive approach by setting out its main salient characteristics.

3.1 EVALUATION OF IS/IT INVESTEMNSTS

Evaluation is an appraisal process usually by careful study of an object's condition or to determine the worth or significance of something (Merriam-Webster dictionary; House, 1993). According to Dressel (1976), "an evaluation is both the worth or impact of a program, procedure, or individual, and the process whereby judgment is made." Patton (1986) writes about program evaluation as to be a procedure that systematically collects information about the activities, characteristics, and outcomes of programs for use by specific people. He states that the main purpose here is to decrease uncertainties, improve effectiveness, and thus based on the evaluation result make appropriate or right decisions regarding what those programs doing and affecting. Patton (1986, p.14) continues to write, such definition of evaluation emphasizes on mainly four points as shown here: This definition of evaluation emphasizes (1) the systematic collection of information about (2) a broad rage of topics (3) for use by specific people (4) for a variety of purposes.

Furthermore, Patton mentions several important characteristics that clarify the difference between the basic scientific research and the program evaluation. Patton argues the basic scientific research is conducted to discover new knowledge, test theories, establish truth, and generalize across time and space. Whereas, program evaluation is utilized to reduce uncertainties, inform decisions, clarify options, and provides and facilitates information about programs and policies that function within the limited contextual zone of time, place, values, and politics. While research is aimed at truth, evaluation is focusing on and addressing action, argues Patton (1986).

Evaluation is either a conscious or tacit process aimed at establishing the value of or the contribution gained from a particular situation (Remenyi and Sherwood-Smith, 1997; Dressel, 1973; House, 1993). The evaluation process according to Willcocks (1992, p. 364), "is about establishing by quantitative and/or qualitative means the worth of IS to the organization… bringing into play notions of cost, benefit, risk, and value." Evaluation of IS/IT investments is generally taken to mean the identification and the measurement of capital expenditures spent on

and the initial anticipated revenues gained from the deployments of these systems (Symons, 1991.

According to House (1993) in traditional societies in which institutions were build by e.g. church, family or local community there was no need for evaluation due to the nature of decisions. But with the advancement of capitalism and with its aid, those traditional institutions broke done and as a result evaluation has become a formal practice. House argues during the rapid development of capitalism, evaluation also has changed its character both the structural basis and conceptual underpinnings of the field. He continues to explain that evaluation has structurally become more integrated into organizational activities.

Conceptually, evaluation has moved from being monolithic to pluralist notions (House, 1993). This means multi-criteria, new approaches, interests, models, multi-concepts and measurements are what constitute and represent evaluation as a multidisciplinary profession. House argues that the future status of evaluation as a profession depends on how modern market societies develop. Relevant to the notion of IS/IT evaluation, there are many important concepts defined and related to different local contexts. Some of these important concepts are; evaluator, content, context, process, consensus, stakeholder, subjectivity and objectivity, reliability, validity, formal and informal, competence, political and organizational mandate, evaluation approaches and their associated methodologies, the role of researchers/evaluators, evaluation findings and many other important terminologies that will be reviewed, discussed and thus outlined later in the following chapters (see Chapters 4 & 5).

The purpose of IS/IT evaluation, the purpose of IS/IT evaluation has generally emerged from one big problem that is linked with IS/IT investments. Meaning, the difficulty to identify if and where benefits have actually occurred. To address this issue, evaluation is thus a process aimed to help organization to handle this and many other related issues. Lin & Pervan (2001) state, investments are commitment of resources that are made with the purpose of realizing benefits that will occur in the future. In other words, its aim is to identify and quantify costs and benefits (e.g., Serafeimidis, Smithson and Tseng 1996; Remenyi and Sherwood-Smith 1999) of an IS/IT investment. Evaluation of IS/IT investments is generally viewed as a key strategy which aims to justify and also better manage the IS/IT investments (e.g., Remenyi and Sherwood-Smith, 1999). According to Remenyi and Sherwood-Smith (1999, p. 17), the key issues that evaluation of IS/IT investments can contribute to include:

- *Learning how to manage investments better*
- *Understanding the risks involved in making the information system deliver the anticipated benefits*
- *Obtaining commitment from information systems staff and users*
- *Facilitating corporate learning*

According to Symons & Walsham (1988) the function of evaluation process is to contribute to the rationalization of decision making. Willcocks (1992) writes that by deploying quantitative or qualitative methods, the worth of IT to organization can be examined. Table 1 shown below illustrates seven reasons for evaluation of IS/IT investments.

TABLE 1: LIN AND PERVAN (2001) SEVEN REASONS FOR IS/IT EVALUATION

Seven reasons for evaluation of IS/IT investments
Part of process of justification for a project
Enabling organizations to make comparisons of the merit of a number of different investment projects competing for limited resources
Providing a set of measurements which enable the organizations to exert the control over the investment
As a learning device which is necessary if the organizations is to improve its system evaluation and system building capability
Ensuring that system will continue to perform well by selecting the best alternative in the beginning of the project.
Supporting the IS broader business objectives and providing for future business expansions
Enabling organizations to gain competitive advantage, to develop new business, to improve productivity and performance and to provide new ways of managing and organizing.

3.2 WHY CHANGE GUIDING METHODOLOGICAL PARADIGM?

Before moving forward to review interpretive IS/IT evaluation literature in the subsequent Chapters (see Chapters 4, 5), this Section, based mainly on the work of Guba and Lincoln, will shortly summarize the reasons behind the 'guiding methodological paradigms' from both philosophical and organizational perspectives. This will indeed serve as the natural or logical basis for an extensive treatment of interpretive evaluation approach (IEA) coined by Guba and Lincoln as 'Fourth Generation Evaluation' in the remaining parts of this paper.

The reasons behind the paradigm change can be studied from two different, and at the same time, interrelated perspectives. One perspective is concerned with the philosophical issues (e.g., the need for changing the basic believe system that guides inquiry/evaluation), and the other perspective is focusing on more applied or operational matters. Each of these perspectives in turn consists of many considerations that will be referred to over and over again in this paper, particularly in this Chapter which is dedicated entirely to the treatment of 'Fourth Generation Evaluation'. After all, the positivistic paradigm has had a long and distinguished history, not only in the social sciences but in the natural sciences as well. Indeed, it was mainly due to the extraordinarily success that scientific method enjoyed in those old sciences that social scientists were persuaded to adopt the positivistic methodology. However, now it is time to question the

traditional evaluation methodology, argued Guba and Lincoln (1989). To tackle this question, among a variety of considerations, the philosophical and operational considerations can be brought to bear in dealing with this question. First, I shall begin with the operational matters.

- The positivistic methodology

The positivistic methodology does not contemplate the need to identify stakeholders and to solicit claims, concerns, and issues from them. In conventional methodology the investigator (evaluator) may have her/his own perceived hypotheses or theoretical considerations but the propositions or questions to be investigated are determined a priori regardless of the evaluator's own subjective view or purpose. Positivists view our mundane world as a "real" or single reality governed by natural laws, and the aim of science is to discover and thereby describe these natural laws. This means, a given inquiry is directed by those descriptions and laws of which the positivists are already reasonably sure, and can manipulate them, extending them, developing them, or applying them in new situations to get desired results. Positivists do not view these descriptions and laws as subjective; rather they see them to be objective or facts. Consequently, these facts are then used to predict and control subsequent events.

Given such a positivistic construction, conventional evaluators do not see any need to discover or find out who the persons or groups and thus their personal opinions or constructions (more on stakeholders' constructions later in this paper) are. Guba and Lincoln (1989) argue that such unique interests expressed by positivists can hardly make them to be qualified evaluators or to direct an inquiry. "Their constructions are at best matters of perspective," wrote Guba and Lincoln (p. 58). While postpositivist inquirers would agree that one cannot know the 'real' world in a definite way but can come to see it only from a variety of different perspectives, they do not doubt that each perspective is, in its own way, an approximation of the reality as it truly exists.

If different stakeholders have different constructions (perspectives), the task of an inquirer is not to deal or address each of these at its own right but to discover the best construction (perspective) that best approaches the reality. It is this perspective that interpretive approach recognized in order to incorporate the stakeholders' concern in the evaluation process or the need for close work with stakeholders. In other words, the active involvement of stakeholders is of paramount importance. However, in contrast to interpretive paradigm, positivists as well as postpositivists do not recognize or do not embrace the equal importance of all constructions created by involved stakeholders as different meaningful 'realities'.

- Conventional methodology

Conventional methodology cannot solicit claims, concerns, and issues except by adopting a "discovery" rather than a "verification" posture, but only the latter is served by positivist or postpositivist paradigm. Scientists have long realized that process in science is not always orderly, but depends heavily on intuitions, or mental experiments to provide propositions that can then be tested or verified in authentic scientific way. These prescientific term is called the 'discovery' phase. Guba and Lincoln argue discovery is always a creative process and cannot be ruled by a set of steps, and constructivist paradigm is appropriate to both discovery and validity. It means, any attempt to distinguish between discovery and validity is meaningless.

Conventional methodology does not take account of contextual factors, except by physically or statistically controlling them. Within the basic believe system of conventional paradigm, the

11

world is consisting of confusing variables and the task of an inquirer is to focus specifically on significant parameters, and controlling all other variables so-called "…the confounding variables-that may mimic, mask, or overwhelm them, "wrote Guba and Lincoln (p. 60). But to conduct investigations in this way effectively strips away the context and wrongly points to the results that have yielded only in other contextless situations. It means concentrating only on the internal validity makes the results less and less likely to be fruitful or valid in external contexts. Whereas, in interpretive paradigm constructions held by people are the products of their interactive interactions with the surrounding contexts, people create their own constructions that in turn influence and influenced by their contexts.

Conventional methodology does not provide a means for making evaluative assessments on a situation-by-situation basis. The conventional methodology is aimed toward identification and harnessing of factors that will act in particular way and known to act in predictable ways in various situations. Indeed, the end product of an inquiry is to generalize the finding which is a time and context-free assertion, not a specification which is a time and context-bound assertion. On the contrary, the constructivist paradigm focuses on the context of evaluation and stakeholders' created constructions that are historical or situational. What is important here is the learning issue or understanding which will enrich the future evaluations.

Conventional methodology's claim to be value-free makes it a dubious instrument to use in an investigation intended to lead to a judgment about some entity (an evaluand). Sciences' claim to be value-free is well known. It is true that value is the root of the term evaluation. It was with the emergence of third generation evaluation (see Section 3.3), which the term value and valuing became important and central because the evaluators' judgments, whatever, are always derived from valuing some values. Indeed, value judgments are made in the presence of value standards. Whatever everyone agrees on the standard values or not, particularly in our modern pluralistic societies, it is very difficult to see how the establishment of values and their applications are incorporated into a process that disclaims values from the start, argued Guba and Lincoln. There are also other issues that can be raised at the philosophical level. Among the more salient are these;

- The theory-ladenness of facts, and the factual underdetermination of theory

Positivists believe that there coexists a separate bilingual language: one theoretical language whiting which propositions or questions can be cast or manipulated, and the other is an observational language within which they (i.e., the propositions) can be tested empirically. The results of such tests are "facts" that determine the truth or falsity of questions at issue. Whereas, the constructivists believe facts and theories are so intricately intertwined that can hardly be separated. Guba and Lincoln (1989, p. 63) write, "Separate theoretical observational and empirical languages are in principle impossible to formulate."

- The value-ladenness of facts.

It is widely recognized that the conventional paradigm is not value-free. Values permeate every paradigm that has been proposed or might be proposed, because paradigms are human constructions, and cannot be hence impervious to human values.

- The interactive nature of the knower-known dyad.

The conventional paradigm is based on a premise called "subjective-objective duality", it presupposes the inquirer (subject) can assume and maintain a separate objective position in relation to the study program (object). It is believed that if the inquirer adopts such stance then the findings cannot be other than the characteristics of the object (inquired-into). In contrast, the constructivist paradigm claims that all knowledge, including evaluation theories and methodologies, are human constructions. These constructions are created by humans or the products of their interactions.

The hermeneutic dialectic is at the center of constructivist paradigm process which requires constructors (evaluators) to address and thus confront one another's constructions. Constructivist paradigm doesn't recognize the 'subject-object duality' as mentioned the conventional paradigm does. Interpretive approach cannot be understood without knowing its underlying philosophical assumptions and key theoretical concepts. Therefore, here it is time now to study the meaning and the main characteristics of hermeneutics/Interpretivism in order to know what the hermeneutic dialectic circle (see Figure 3) is, why and how it will be used and related to the interpretive evaluation approach (IEA). Hermeneutics, 'Descriptive Interpretation' (Delius, 1953), and, especially, Situated-Hermeneutic (Jones and Hughes, 2001) can be briefly described as the methodology of contemplation, sensing (Gioia and Pitre, 1990), understanding, interpretation, reinterpretation, perceiving, witnessing and evaluation of texts, messages, events, processes and human actions. Guba and Lincoln (1989) maintain, it is about constructions or 'created realities' (pp. 143) that must be meaningful and subject for free interpretation.

Hermeneutic approach advocates a social holistic research view which permits and encourages participatory communities to be actively engaged in any studied or target subjects/programs, whether processes or human actions. The characteristically feature of situated Hermeneutic approach is its emphasis on the "meaning" which in the most cases hard to quantify (e.g., Klein and Myers, 1999; Ward and Daniel, 2006). Therefore it paves the way for discussions in which actors share information with each other and finally will reach a level of commonsense of understanding that is shared by all community or group members (Guba and Lincoln, 1989). Klein and Myers (1999) state, the hermeneutic circle is the most fundamental principle of hermeneutics philosophy, because it is the base to all interpretative work and actually a meta-principle upon which six principles of hermeneutic approach expand (see Chapter 4, Section 4.1, Table 3). Similarly, Guba and Lincoln (1989) have interpreted the original hermeneutic circle and thus designed their own version of it which they write to work as the kernel of their constructivist methodology (see Chapter 5, Section 5.6, and Table 6). In order to show, visually, what a hermeneutic circle would look like, I have modified a typical hermeneutic circle shown below (see Figure 2).
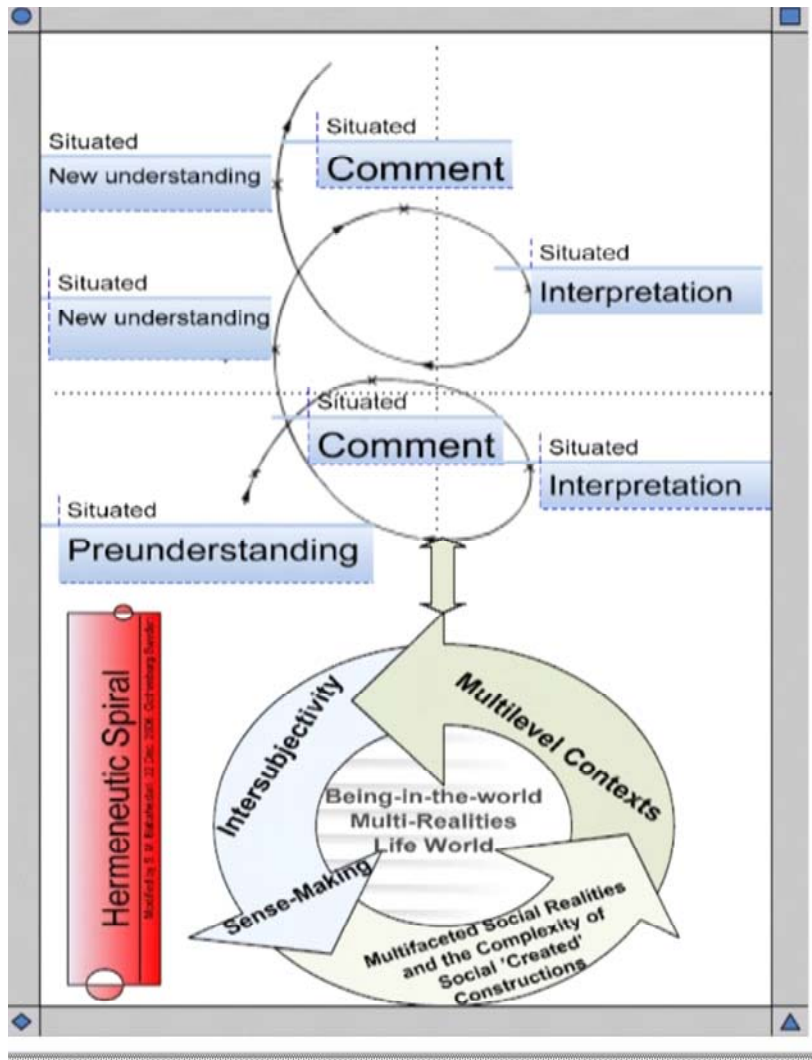
FIGURE 2: THE HERMENEUTIC SPIRAL (ERIKSSON AND WIEDERSHEIM-PAUL, 1997), MODIFIED BY BABAHEIDARI, S. M. (2006)

This hermeneutic circle is comprised of a spiral and a circle which contains main important underlying philological assumptions of the philosophy of hermeneutics. These philosophical concepts are indeed interconnected. Interpretive approach is based on the hermeneutics[1] philosophy (e.g., Guba and Lincoln, 1989; Walsham, 2006). As it is shown in figure 2 above, the aspects of understanding and interpretation are connected to the spiral part of this hermeneutic circle. It can be said that a preunderstanding leads to interpretation and this later in its turn leads to new comment to evaluate the phenomenon/subject. It then continues simultaneously to new understandings and new interpretations until we reach an agreement or agree upon our

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[1] Some English spoken authors prefer to use hermeneutics with the letter 's' in the end but some others omit 's' and write hermeneutic

understanding for future act. Needless to say, there is a big difference between interpretation[2] of a thing and understanding[3] it. This agreement may lead or enables us to make e.g., a decision. Here I shall explain briefly what those concepts shown in Figure 2 above mean from the perspective of interpretative evaluation approach (IEA).

Interpretation**,** interpretation means how we see things and their diverse actions, various organizational processes etc in their completion or totality. In interpretation, when we see a thing, such as a car, we don't see immediately its shape, color, noises etc. Instead, we see a car as a whole or complete thing. It means the evaluator/researcher views the study program as a completion or whole, it'll say a holistic view.

Understanding**,** understanding connected to interpretative approach when evaluating IS/IT investments enhance further or new understanding of future evaluation. This hermeneutic spiral shows that all feedbacks, assessments of observed experiments and understandings of artifacts are actually derived from personal point of world's view and conclusions are value-laden or subjective. Subjectively or individually perceiving the mundane world underpins the structure of situated Hermeneutic approach or Interpretivism (Jones and Hughes, 2001). Hermeneutic thinking requires transparency and it encourages effective participations (i.e., stakeholders) (Guba, Lincoln, 1989; Walsham, 1995, 2006). It allows assessing and reassessing of experienced situations in transparent and shared environments (ibid).

The proponents of hermeneutics advocate evaluation as a complex process and in order to understand these complexity evaluators should live it personally. Hermeneutics is about life-world and being-in-the-world. This aspect called '*throwness*' is better understood if we see social actors, in this case interpretative evaluators or interpretivists, that are thrown into their subjects of evaluation or life-world (Jones, Hughes, 2001). Hermeneutics as a philosophical mode of inquiry rests upon idealism which claims that the world is the creation of and interpreted by mind.

Hermeneutics philosophy views the world as the subject matter comprised of multi-realities and multi-purposes (Miller, 1972). In other worlds, all significant human actions are meaningful actions and purposeful. Given that, it is only through our perceptions that enable us to comprehend the 'true' nature of the multi-objectivities world. Max Weber (1864-1920) believed, things that exist in space are merely external shows or appearances and have been produced by our thoughts. In other words, their existences depend upon articulations derived from our cognitive perceptions. In hermeneutics, the meaning of an action, event or an object is ultimately dependent upon socially, historically formed pre-understandings which may be largely in shift and difficult to explicitly express. Hermeneutics apparently favors the dynamic, the subjective, the multilevel contextual and particular aspects that the positivism typically neglects (Guba and

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[2] "The seeing of things in their completion rather than in terms of their characteristics," writes Watts, 2001, p. 93)

[3] "Dasein's a priory (innate) rudimentary understanding of its everyday world, the things in it and how it fits into this world. This pre-conceptual comprehension of existence is a fundamental feature of Dasein's being-in-the-world." (Watts, 2001, 95)

Lincoln, 1989). These human aspects that are addressed by hermeneutics way of looking are essential to any attempt to understand and evaluate effectively and fairly.

The hermeneutics school (e.g., Schultz and Hatch, 1996) contains valuable aspects that can be appropriated to evaluation research inquiry by which people may make sense of their world. Hermeneutics or interpretative approach is appropriate for evaluation of IS/IT investments, because evaluators interpret a subject and at the same time attempt to achieve richer understandings of themselves, i.e., Being-In-The-World.

Klein and Myers refer to Gadamer (1900-2002) who views understanding as a cognitive process or a mental activity of comprehending the part of a thing in its whole context and vice versa in order to ensure the correct understanding. Gadamer emphasizes the harmonization of all details with the whole as a necessity criterion to enable and ensure the 'understood meaning' (p. 71) is unified. It means, the parts and the whole of a thing must be understood from the perspective of a particular historical context or contexts called contextualization (ibid). The parts can be the interpretive researcher's and the interpretive participant's preliminary understandings (i.e., preunderstanding) in the study. Then the whole understanding emerges as the shared meaning derived from interaction between them (i.e., researcher and participant) (ibid). Klein and Myers note that:

> *Hence, in a number of iterations of the hermeneutic circle, a complex whole of shared meanings emerges. This interpretation should be used in applying the principle of interaction between the researchers and subjects (p. 71).*

One question to be asked here is what it means by so-called interpretation, or interpretation "without presuppositions." All interpretations are value-laden (p. 136). In addition to this value-laden notion, Winogard (1990, pp. 74-75) interprets the concept of 'interpretation' as;

> *Knowledge is always the result of interpretation which depends on the entire previous experience of the interpreter and on situatedness in a tradition. It is neither 'subjective' (particular to the individual) nor 'objective' (independent of the individual)."*

In the context of evaluation, it means evaluators regardless of their claims have preliminary assumptions (e.g., Bezzi, 2006). Many philosophers assert that all understanding is temporal, intentional and historical. There are many IS/IT papers supporting this view and emphasize on the importance of the historical notion of understanding related to both deployments of IS/IT, in general, and evaluation of IS/IT investments, in particular, when conducting interpretative approach to evaluate IS/IT investments (e.g., Symons, 1991 Jones and Hughes, 2001). Particularly, Jones and Hughes (2001, p. 190) write about 'situated hermeneutic evaluation' and see evaluation as historical or situated. According to Palmer (1969) two main components in hermeneutics are interpretation and the meanings of understanding that are both different form each other (p. 7). Guba and Lincoln argue that, "The constructivist paradigm, also called the naturalistic, hermeneutic, or interpretive paradigm (with slight shading in meaning), has been in existence for several hundred years as well, but also has not been widely accepted or understood…It has nevertheless now emerged as a serious competitor to the conventional paradigm," (p. 84). The authors write that the constructivist paradigm as a world's view deal with and answer three philosophical questions, see Table 2 below.

TABLE 2: THE CONSTRUCTIVIST OR INTERPRETATIVE BELIEVE SYSTEM (GUBA AND LINCOLN, 1989), MODIFIED BY BABAHEIDARI, S.M. (2006)

The Constructivist, Hermeneutic or Interpretive/Interpretative Paradigm or World's Believe System	
ONTOLOGY	A relativist ontology asserts that there exist multiple, socially constructed realities ungoverned by any natural laws, casual or otherwise. "Truth" is defined as the best informed (amount and quality of information) and most sophisticated (power with which the information is understood and used) constructions on which there is consensus (although there may be several constructions extant that simultaneously meet that criterion).
EPISTOMOLOGY	A monistic, Subjectivist Epistemology asserts that an inquirer and the inquired-into are interrelated in such a way that the findings of an investigation are the literal creation of the inquiry process. Note that this posture effectively destroys the classical ontology-epistemology distinction.
METHODOLOGY	A Hermeneutic Methodology involves a continuing dialectic of interaction, analysis, critique, reiteration, reanalysis, and so on, leading to the emergence of a joint (among all the inquirers and respondents, or among etic and emic views) construction of a case.

As it is shown in table 2 above, the underlying philosophical assumptions of constructivist or interpretative paradigm are arranged in three levels; *ontological*, *epistemological*, and *methodological*.

Ontologically, the adherents of interpretative paradigm assert that multiple and sophisticated constructions may coexist as the social products of distinctive individuals who through their social interactions make sense of their surroundings. The coexistence of various constructions will enrich the understanding of the evaluation program, and here it is dubious that interpretative paradigm will require, "…a term like truth…," (Walsham, Lincoln, 1989, p. 86). Concerning the 'validity' or 'truth' of the findings, Guba and Lincoln note that the moral imperative laid upon adherents of the interpretative paradigm is that they continuously challenge and learn from a variety of sophisticated constructions.

Epistemologically, the followers of the constructivist paradigm state that what are 'out there' can be understood only through stakeholders' active engagements or processes of inquiries.

Evaluators are human and cannot ignore their own and other persons subjectivity who are involved in the inquiry process (Guba and Lincoln, 1989). Or as Guba and Lincoln argue, the values of the inquirer and those influential bodies (i.e., especially sponsors, funders, and professional peers) inevitably enter the whole enquiry process "…in connection with the whole series of decisions involved in designing, mounting, and monitoring" (p. 88).

Methodologically, the adherents of constructivist/interpretative paradigm assert that the ultimate criterion is to gain better understanding of the created constructions. That is to make sense of the 'Embodied Interaction' (Dourish, 2004). The openness towards other constructions will lead to or provide, "…the opportunity for revised or entirely new constructions to emerge-a hermeneutic methodology" (p. 89). The hermeneutic process is aimed toward developing (joint) constructions, argued Guba and Lincoln. Concerning the constructivist methodology (i.e., a specific operational guidelines in twelve steps) shown in table 7 (see Chapter 6), Guba and Lincoln do not indeed insist that their methodology is the best and the only appropriate interpretative methodology of inquiry to be completely utilized. Instead, they write that the choice of an appropriate interpretative methodology should be in accordance with the evaluation criteria that undoubtedly vary from case to case.

3.3 THE METHODOLOGY OF CONSTRUCTIVIST INQUIRY

Methodology is best understood as the overall strategy for resolving the complete set of choices or options available to the inquirer. Far from being merely a matter of making selections among methods, methodology involves the researcher utterly-from unconscious worldview to enactment of that worldview via the inquiry process. Thus the methodology of the constructivist is very different from that of the conventional inquirer. The later is linear and closed. By contrast the former is interative, interactive, hermeneutic, at times intuitive, and most certainly open. That is the most methodology to enact may be taken as axiomatic… (Guba and Lincoln, 1989, p. 183)

Due to the complexities of the evaluation process, whether positivistic or interpretative, it is always difficult to formulate a set of procedures or steps to conduct, in this case, interpretative approach (Guba, Lincoln, 1989). It means, doing this will inevitably result in an oversimplification. Such approach ignores to capture enormous creativity and adaptability that most evaluators whatever of type bring to their tasks (ibid). Despite this, we have to make a choice by constructing a methodology which takes the essential aspects of evaluation into account (ibid). Guba and Lincoln continue to write that it is important to distinguish between evaluations that are intended to add knowledge or understanding and those intended to assess some state of affaires. Guba and Lincoln emphasize that the methodology of constructivist inquiry (see Figure 3) shouldn't be seen as a two-dimensional flowchart, because e.g., the hermeneutic circle itself is spherical or there are parts in this flowchart that are not joined by lines or arrows with each other in order to clarify their relationships etc.
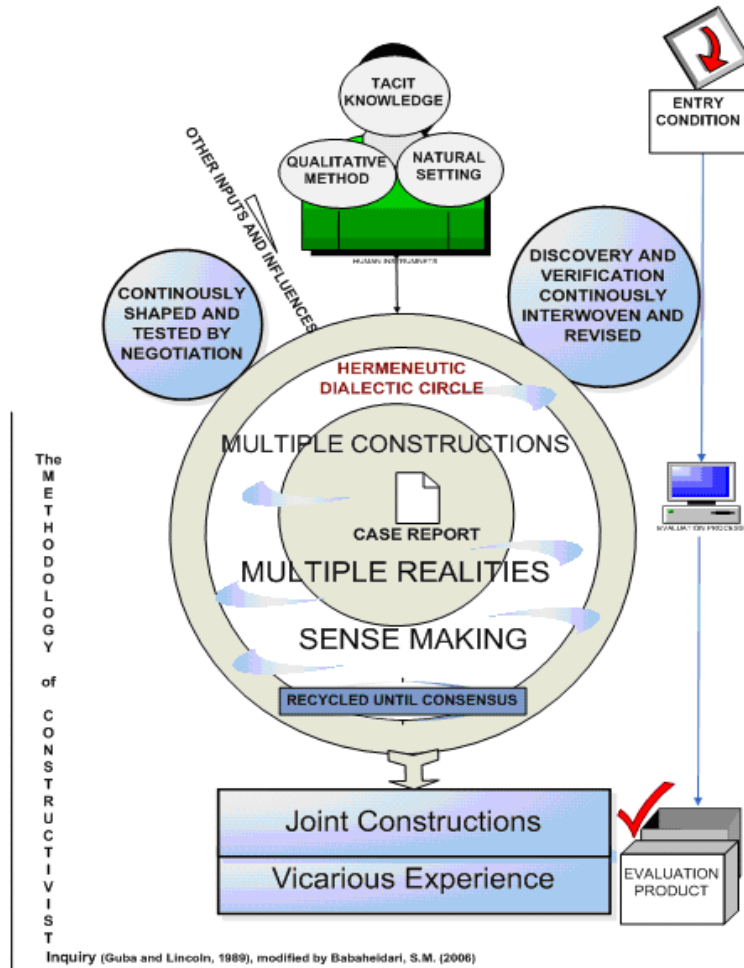
FIGURE 3: THE METHODOLOGY OF CONSTRUCTIVIST INQUIRY (GUBA AND LINCOLN, 1989), MODIFIED BY BABAHEIDARI, S. M. (2006)

Rather, figure 3 should be seen as visualization deduced from the basic world's view of constructivism. However, figure 3 is comprised of a set of specifications that will be explained here in this section. First, four specifications- entry conditions- of constructivist inquiry known as;

- Natural setting
- Human instruments
- Qualitative methods
- Tacit knowledge

These entry conditions are the basics on which the constructivist must insist; otherwise it will be meaningless to continue with the constructivist inquiry (Guba and Lincoln, 1989). In other words, this set of entry conditions must be met first; otherwise there is no point to refer to figure 3 above as a constructivist methodology. These entry conditions will be briefly described below as follows.

Natural setting; First, it means the constructivist methodology must be conducted in a natural setting. The natural setting as the first condition is a consequence of the relativist ontology undergirds constructivism (Guba and Lincoln, 1989). If multiple realities are assured and they are time and context dependent of the evaluators who hold them, it is essential that evaluation be done in the same time/context frame the evaluator seeks to understand (ibid). "Contexts give life to and are given life by the constructions that are held by the people in them," argue Guba and Lincoln (1989, p. 175). Second, interpretivists are unwilling to assume that they know enough about time/context frame a priori to know what questions to ask (ibid).

Interpretative evaluators don't use someone else's emic[4] construction with a set of predetermined questions based solely on the evaluator's etic[5] construction (ibid). In other words, the emic is a description of an actor's behavior or perceives by and meaningful to she/he whether consciously or unconsciously. Whereas etic is what an observer/evaluator senses or interprets of the local context that is studied by her/him. While this later etic account is linked with positivistic approach, the emic is liked with Interpretivism which in contrast to positivism seeks no generalization of the findings.

Guba and Lincoln write that interpretivists enter the frame (i.e., the study program) as learners and not knowing what they don't know. Interpretivists can know only after they entered the frame which enables them to discern what is salient (in terms of characteristics derived from emic views of the respondents) and then focus on that. Guba and Lincoln (p. 175) maintain:

> *The human is the instrument of choice for the constructivist, and, it should be stressed, the only **possible** choice, during the early stages of an inquiry. Objections that humans are subjective, biased, or unreliable are irrelevant, for there is no other option.*

Human instruments; given that the human instrument is to be employed, what comes to mind immediately is the question of which appropriate methods to use is easily answered those methods that come most readily to hand for an evaluator. Guba and Lincoln argue the use of human instrument suggest that the methods conducted should be primarily those that are people-friendly, it will say qualitative methods.

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[4] *Merriam-Webster's Collegiate Dictionary/Thesaurus defines EMIC as, "relating to, or involving analysis of linguistic or behavioral phenomena in terms of the internal structural or functional elements of a particular system."* Notice Emic is used here in the evaluation context, particularly used by interpretive IS/IT evaluation researchers, it refers to description of stakeholders' local meaningful constructions (consciously or unconsciously), and their rules. Thus, interpretive IS/IT evaluators do not generalize their evaluation findings.

[5] *"Of, relating to, or having linguistic or behavioral characteristics considered without regard to their structural significance," Merriam-Webster's Collegiate Dictionary/Thesaurus.* Etic refers to the positivistic evaluators' preconceptions or perceptions of stakeholders' constructions aimed to facilitate comparative research/evaluation for making universal claims (i.e., generalization of the evaluation findings).

Qualitative methods; Guba and Lincoln argue these methods are clearly qualitative by nature. They continue to write human collect information, best and most easily, through direct utilization of their senses and thus sense-making of the constructions. Here, the notion of 'involved evaluator' coined by Walsham (1995) which will be described in the next chapter makes sense, because it is only through close engagement that en evaluator can enter in other person's 'life-world' in order to understand more, or, as Guba and Lincoln note to reach the broadest base for achieving local understanding. Appropriateness of qualitative evaluation methods in relation to the interpretative/constructivist choice of methods, Guba and Lincoln argue interpretative researchers are free to conduct quantitative methods without prejudice when it is appropriate to do so (for example, the use of questionnaire, poll, survey, or other appraisal tool to collect information from a broad spectrum of individuals). But the authors emphasize conducting these assessment tools to gather information must be grounded. Meaning, these information must be derived on and thus reflect the emic views of local respondents.

Tacit knowledge; the constructivists insist on the right to embody and use tacit knowledge (Polanyi, 1966). Guba and Lincoln (p. 176) define tacit knowledge as, "…all that we know minus all we can say…" The later (all we can say) according to these authors is propositional knowledge which limits what can be studied within the traditional paradigm (i.e., positivistic). The constructivist enters in, e.g., a local context without propositions in mind or knowing what is going on. The question that can be asked here is how the constructivist will go about to sense what to do or where to start? Guba and Lincoln answer this question by saying that during the enquiry/process, the tacit knowledge of the Constructivist/Interpretivist will bring to bear. Guba and Lincoln maintain it is this tacit understanding of situation that from the first stage of inquiry or evaluation process serves the constructivist/evaluator to knowledge that is crucial.

Respondents, respondents that enter the hermeneutic circle should be selected. The selection of respondents is not for the purpose of representing for example the subject of study such as surveying a population. This sampling is rather for other purposes such as purposive sampling which describes the process. According to Guba and Lincoln, Patton (1980) has described six various types of purposive sampling (that is, to serve other purposes than representiveness and randomness of the subject). However, these six different types are:

  I.   Sampling extreme or deviant cases
 II.   Sampling typical cases
III.   Maximum variation sampling
IV.   Sampling critical cases
 V.   Sampling politically important cases
VI.   Convenience sampling

Guba and Lincoln argue, to achieve local understanding, the choice of constructivist is maximum sampling because it provides the broadest scope of information. Such sampling (i.e., maximum sampling) are characterized by serially and contingently sampling. The first one refers to the data collection from the preceding sampling element which has already been accomplished and than and only than the sample element will be chosen. The second, contingency, character refers to the difference between succeeding and preceding elements that vary from each other. In this case, elements of are chosen to best serve the particular needs of the evaluation at the moment. For example, as said above, respondents may provide constructions that are different from those people provided before. Guba and Lincoln maintain, later in the process as elements

become identified that emerge salient in that time/context frame, we may wish to select respondents that are aware, informative and articulate about those items of information.

Continuous interplay of data collection and analysis, the second element with the hermeneutic circle is the continuous interplay that occurs between data collection and analysis as the evaluation process progresses. Grounding the findings of respondents, this is the third element in the hermeneutic dialectic process which emphasizes the findings be grounded. In other words, the findings emerge from the constructions of respondents themselves. As data collection proceeds, the data analysis proceeds at the same pace. The data analysis will generate ever-more complex stable agendas to guide subsequent data collection. Over time, the important task of an evaluator here is to ask respondents to critically review their already developed constructions, and then a join construction will emerge which leads to forming a consensus. This new construction indeed differs from the previous constructions that respondents had offered. This joint construction which is grounded must meet certain criteria.

Drawn on the work of (Glaser and Strauss, 1967), Guba and Lincoln emphasize, first, it must *fit* and it must *work*. Second, the authors (Guba and Lincoln) argue it (i.e., the finding) must have *relevance (Glaser, 1978)* based on core problems and the respondent's constructions that have emerged in the situation and not from a grand theory. Deconstructing the respondents' constructions is a complex issue which requires socially and professionally skilled evaluators to accomplish this task. This can be linked with the Walsham's notion of 'involved researcher' which will be described in the next chapter (see Chapter 5). As a fourth or final criterion, Guba and Lincoln (1989, p. 179) write:

> *Finally, and perhaps most important, it must exhibit* **modifiability** *(Glaser, 1978), that is, the construction must be open to continuous change to accommodate new information that emerges or new levels of sophistication to which it is possible to rise.*

Emergent design, this is the final element in the hermeneutic circle. Initially, the evaluator has no preconception about the subject or does not know what she/he does not know, "…it is impossible to be very specific about anything," argued Guba and Lincoln (1989, p. 179). But as the evaluation process continues, the evaluator seeks continuously to understand and thus refine and extend the design to helps it be unfolded. After selecting sample elements, recording data, and devising each element of the joint element, the design itself can become more focused. Then, the constructivist can become more acquainted with what is salient and thus she/he is able to cycle and recycle the hermeneutic circle, "…sometimes retracting steps or leaping across intervening stages, until there is consensus," argue Guba and Lincoln (1989, p. 180). In addition to the notion of consensus it is important to emphasize, while constructivist/interpretative evaluator focuses on consensus, the positivist focuses on the criterion of correspondence between findings and reality (Guba and Lincoln, 1989). If there exist multiple realities (constructions), and the actual or potential respondents involved in the evaluation process are as many as of those constructions, then there is probably little chance that a consensus can ever be achieved (Guba and Lincoln, 1989).

3.4 THE EMERGENCE OF INTERPRETIVE APPROACH (UIA)

According to Patton (1986) the scientific (i.e., the natural science) paradigm of 'hypothetico-deductive' methodology initially dominated the evaluation research. This traditionally prevailing paradigm focused on quantitative measurement, experimental design and produced multi-statistical variables (ibid). Patton continues to note that the alternative paradigm in contrast to the traditional quantitative paradigm is relying on qualitative data that is derived from in-depth, open-ended interviews and personal observations. The author (Patton, 1986) calls this new set of data collection or techniques 'naturalistic inquiry' which emphasizes on detailed description derived from close engagement with the programs of study (p. 182). Similarly, the notion of close engagement is emphasized by Walsham (1995, 2006) related to what he calls 'Involved Researcher'. More on Walsham's work later in the next chapter (see Chapter 4).

Following Patton's work, naturalistic inquiry has been treated extensively by Guba and Lincoln (1989) and Erlandson et al. (1993). Guba and Lincoln (1989) argue that the three previous evaluation generations were not sufficient and therefore they proposed to use 'constructivist paradigm' within the notion of naturalistic inquiry or as a synonym to the term naturalistic inquiry which I shall attempt to explore its main characteristics here in this section.

The Position of IEA in Fourth Generation Evaluation, as it was explored earlier in this chapter, the interpretative approach or as Guba and Lincoln (1989, p. 13) call it 'interpretive paradigm' is synonym to constructivist paradigm because of their unified philosophical basis which rests on hermeneutic philosophy. Guba and Lincoln (1989, p. 7-8) content:

> *Perhaps most startling, we don't treat evaluation as a scientific process, because it is our conviction that to approach evaluation scientifically is to miss completely its fundamentally social, political, and value-oriented character.*

In their valuable book, Guba and Lincoln (1989, p.8) call this new approach '*Fourth Generation Evaluation*' which covers and thus addresses the myriad human, political, social, cultural, and contextual elements. Needless to say, all these elements are recognized and covered by *Interpretivism* that is explored throughout this paper. According to Guba and Lincoln (1989, p.8), previously existing evaluation generations were characterized by their various orientations toward 'measurement', 'description' and 'judgment' respectively. Whereas, 'Fourth Generation Evaluation' is emphasizing (p.11) on 'negotiation' characterized by six interesting properties, outlined below.

1. The evaluation outcome of a program (e.g., IS/IT investment) is not the reflection or the true picture of the reality. The outcome is not showing what and how really the research program is and works. Instead, such evaluation outcome represents meaningful constructed realities that individuals or groups of people have created by means of interactive engagement in the evaluation process. This interactive process includes the evaluator as well as many stakeholders that are put at some risk by the evaluation. Findings are not fact, but what emerge are constructions that illustrate the realities of the case.

2. It recognizes that the constructed or created realities through which people/evaluators make sense of their situations are derived and thus affected by the values of the evaluators. If the whole community/team of evaluators/constructors shares a common

value system, then there are few problems. But this is an illusion; because today's modern societies are complex and diverse representing many value-pluralistic realities on the ground. So, if an evaluation methodology claims to be value-free it turns out indeed to be value-laden.

3. It suggests that these created constructions are actually linked to and thus drawn upon many contexts such as; physical, psychological, social, and cultural within which constructions refer to and are formed. The context provides the "surround", within which the evaluators live and shaping constructions and try to make sense. At the same time, the environment itself remains formless until the created constructions of the evaluators in it furnish it with parameters, features, and limits. Moreover, the context influences the people's constructions and will be influenced by these constructions as well that evaluators come to form and hold. Since these same evaluators form part of the context for one another, it's true that the shared constructions emerge gradually. Those evaluators/people who inhibit a particular context will agree upon its nature. But consensus regardless of whatever is agreed upon doesn't imply a greater degree of reality. It means, those who share same construction appreciate or realized its significance. Consensus is derived from the human conceptual exchange in a particular setting. It doesn't necessarily mean that the same consensus would help other persons make sense of their setting. "Finally, precisely because they are the product of human thought, conceptual constructions are subject to human error; none can be considered "true" in an absolute sense or even an approximation of "truth." (p. 9)

4. This emergent form of evaluation recognizes that evaluations can be shaped politically, good or bad for stakeholding groups in various ways. The selective involvement of some stakeholders and denying participation of others, affect the findings and empowering or disempowering stakeholders. Furthermore, it also among other factors affects the instrumentation to be deployed.

5. It suggests evaluation to be an action-oriented which means defining a setting or course of action and thus making sure to be followed fully. By encouraging and stimulating stakeholders, they will be committed to implement the course of action. Very often the evaluation "product" is a set of recommendations that doesn't suit stakeholders that have legitimate concerns. Instead, it only addresses the purpose of the evaluator and the client. If stakeholders are not involved in the evaluation, it, firstly, raises the question of legitimation, and secondly, damages the issue of multi sets of values that reside in situation. If there would be a course of action, then the most stakeholders must agree and it's done through negotiation. Honoring the distinctive set of values, stakeholders will find a reason to participate or find a person to support in evaluation.

6. Fourth Evaluation Generation insists full participative involvement, it's important that most stakeholders feel that they are welcomed as equal partners. It insists that inasmuch as an evaluation involves humans (as clients, as stakeholders, as information sources etc), it's the duty of evaluator who interact with those humans to respect their integrity, dignity, and their privacy.

Guba and Lincoln (1989) write that fourth generation evaluation rests on two elements. One element is responsive focusing which determines the sort of questions to be asked and what

information to be collected based upon stakeholder's inputs. And the second element is, constructivist methodology which executes the evaluation process within the 'ontological and epistemological presuppositions of the constructivist paradigm' (p. 11). Guba and Lincoln argue that, the stance of fourth evaluation is quite different which emphasizes on the philosophical assumption that realities are not objectively 'out there' but are constructed by people.

The people's constructions are under constant influences of a variety of social and cultural factors that lead to shared meanings (ibid). These constructions are created by people as they attempt to 'make sense' (p. 13) of their surrounding environments. Guba and Lincoln content that constructivist or as it were called 'interpretive paradigm' rests on relativist ontology and on a monistic subjective epistemology. The interpretive paradigm's exercise unites "…the evaluator and the stakeholders in an interaction that creates the product of the evaluation, utilizing a hermeneutic dialectic approach aimed at establishing that interaction and maintaining it within quality bound" (p. 13).

CHAPTER 4: IEA IN IS/IT RESEARCH FIELD

This chapter will be dedicated to the treatment of interpretive approach in IS/IT research field, its meaning and position in IS/IT research discourse. It will examine how interpretative IS/IT researchers deal with the philosophical rationale behind interpretive approach, its main characteristics and concepts. Furthermore, it attempts to investigate if there is consensus about the key concepts of interpretive approach.

4.1 PHILOSOPHICAL BASIS OF INTERPRETIVE RESEARCH

In the previous chapter (see Chapter 3), I examined the philosophical assumptions underpinning interpretative approach (IA) in detail along with the main important theoretical concepts and characteristics of IEA coined by Guba and Lincoln (1989) as 'fourth generation evaluation'. In Chapter 3, the interpretative approach was studied, mostly, from phenomenological treatment of and perspective on hermeneutics. Similarly, Klein and Myers (1999) and Walsham (2006) argue interpretative field research is now studied from the philosophical perspective of hermeneutics. Klein and Myers address the interpretative approach derived from Hermeneutic philosophers such as Gadamer and Ricoeur (1913-2005) who according to these authors were best known for combining the phenomenological description with hermeneutic interpretation. De Villiers (2005) agrees with Mitev (2003) and names development research, action research and grounded theory as three pillars for interpretive IS/IT research.

Within the IS/IT research filed, there are many arguments, similar to those discussed in Chapter 3, advocating the importance and thus utilization of interpretive approaches for evaluation of IS/IT investments. As an example, Fitzgerald and Howcroft (1998, 163) conclude that they, "…fundamentally believe that the world is best characterized by an Interpretivist view—thus, reality is socially constructed, multiple realities exist, and what constitutes "scientific research" is both time and context dependent." Fitzgerald and Howcroft (1998) continue to write about soft versus hard dichotomies in IS/IT research such as Interpretivist contra Positivist that are classified and thus described in five levels i.e., paradigm (refers to Interpretivist notion), ontological (refers to relativist notion), epistemological (refers to subjectivist) and finally methodological (refers to the choice of appropriate evaluation or research method which is in this case the qualitative method) levels similar to the treatment of these concepts that were discussed by Guba and Lincoln (1989) explored in previous Chapter (see Chapter 3). However, due to the theoretical framework of this thesis, the positivist dichotomy will be not discussed here in this paper. But instead, drawn on Fitzgerald and Howcroft' (1998) description of above mentioned categorized soft dichotomy dimensions of Interpretivist, I will here give a brief description for each of those terms as follows.

- Paradigm level

Interpretivist; there is no universally truth. Based on the researcher's own frame of reference, understanding and interpretation of the subject of study, in this case interpretation and understanding of IS/IT investments, is always subjective. The realism of context is very important along with emphasize on "non neutrality". In other words, uncommitted neutrality is impossible or does not exist. This will effect both the process and the findings of IS/IT evaluation.

- Ontological level

Relativist; there exist multiple realities created by the various constructions of different group of actors or stakeholders. These social shared constructions will direct how different realities are perceived and thus shaped by the involved people.

- Epistemological level

Subjectivist; interpretive approach refuses the distinction between the researcher and the evaluation/research situation. Because the evaluation findings emerge from the interaction between the researcher and the research situation which in its turn depends on and is influenced by the researcher's own beliefs and values as central mediators. Emic/Insider/Subjective, it origins from anthropology which means research orientation is centered on native/insider's view, with the latter viewed as the best judge of adequacy of evaluation/research (Fitzgerald and Howcroft, 1998).

- Methodological level

Qualitative; it focuses on the "what question". Meaning, what things exist rather than the number or amount of things. It emphasizes on the thick description and more responsive to the needs and natures of evaluation/research situation. Before exploring the philosophical foundation and framework for interpretive research, there is a pressing need for two separate introductory treatments of hermeneutics (this was done in) as well as phenomenology in general which will be directed at clarifying the meaning and the main concepts of these terms. This need has arisen from different sources such as reference literature, interpretative IS/IT articles and particularly as a response to Walsham's (2006) latest article in which he asserts hermeneutics and phenomenology as two possible philosophical bases underpinning interpretive research. This section is dedicated to meet this need. It will explore main concepts of phenomenology as an important philosophical discipline and, especially, its application in IS/IT research field. Moreover, as Klein and Myers (1999) noted, "First, the complete literature of interpretive philosophy comprises so many varied philosophical positions that it is unlikely to yield one consistent set of principles for doing interpretive research… Second, hermeneutics has a relatively settled philosophical base and therefore lends itself to being used as a "bridgehead" for making a contribution to interpretive research methodology." (p. 70).

Phenomenology and hermeneutics argued by (e.g., Klein and Myers, 1999; Guba and Lincoln, 1989; Walsham, 2006) are two philosophical positions underpinning interpretative approach. The inadequacies of the positivistic paradigm and thus its various economic approaches, have led to the emergence of "interpretive" paradigm considered to address many important socio-organizational concepts and issues (e.g. Symons, 2001, Farbey et al., 1993; Walsham, 1995, 2006; Serafeimidis and Smithson, 1999; Frisk, 2004; Berghout and Remenyi, 2005, Stockdale and Standing, 2006). In a recently published reference book entitled "Research in Information Systems" (Avison and Pries-Heje, 2005), there is an interesting short article labeled "Qualitative Research" by Avison and Myers (pp. 238-253) which has briefly treated "interpretative research" and categorized it within the notion of qualitative research discourse. In this article, the authors have described interpretative research derived from Walsham's (1993) description of the term 'interpretative approach' as below (p. 243):

> *Interpretative researchers start with the assumption that access to the (given or socially constructed) is only through social constructions such as language, consciousness and shared meanings. Interpretative studies generally attempt to understand phenomenon through the meanings that people assign to them and interpretative methods of research in*

IS are 'aimed at producing an understanding of the context of the information systems, and the process whereby the information system influence and is influenced by the context.

What can be drawn from above description is actually an example which shows the emergence of hermeneutic or interpretative approach and its application in IS. By looking at above main concepts (i.e., socially constructed constructions, understanding, conscious, meaning, context, people's engagement and socio-technical influences that users and IS have on each other), it's apparent that these mentioned aspects of interpretative approach coincide with what have been explored in the previous chapter in which the main characteristics of hermeneutic or interpretative approach was reviewed.

Additionally, the authors (Avison and Myers) have referred to (Boland, 1991; Walsham, 1993; Klein and Meyers; 1999; Walsham, 1995; Benbasat et al., 1987) as some prominent contributors or pioneers of interpretative research in IS. Why I draw this, it is because I want to show that during my literature study, aimed to produce this master's thesis, I personally realized that there have been indeed published a limited number of IS/IT-centric both research and evaluation literatures that would deal with "interpretative approach", or particularly covering interpretative approach and its application in the evaluation field of IS/IT investments. Or, as Jones and Hughes (2001) noted, "IS evaluation is a subject that traditionally has not been given significant attention, particularly in IS practice." However, an early paper by Walsham (1995) investigates the emergence of interpretative research and its position in IS research literature. The author examines the state of interpretive research and thus reviews a large number of previous interpretive papers. Thus, Walsham addresses interpretive research by drawing his work on the previous interpretive approach to information systems that was carried out by Boland (1979, 1985). Boland uses phenomenology and hermeneutics as the philosophical bases for his research. He argues that the use, design and study of information systems are best understood as a hermeneutic process (Walsham, 1995, p. 378).

4.2 EXAMINING THE MAIN CONCEPTS OF IEA

There are some intrinsic concepts of interpretive approach that Walsham (1995) writes about that I shall, here in this section, attempt to explore. As an example, his adaptation of the theory of Contextualism (i.e., developed by Pettigrew) of the context, content and process (CCP) framework which he states to be the theoretical starting basis for the study of IS strategy and its implementation. Walsham (1995) contents, it is desirable that interpretive researchers have a considerable degree of tendency toward an openness to, "… the field data, and a willingness to modify initial assumptions and theories" (p. 76). He argues, this will result in an initial process of data collection and analysis. Moreover, Walsham cites Orlikowski (1993) who describes her use of grounded theory as the fundament of her own interpretive case studies. Walsham (1995) goes on to note the possibility of utilizing interpretive approach to gain access to knowledge in a particular subject domain (i.e., what Interpretivism is actually stands for) while avoiding to think representing the ultimate truth in the studied subject.

An early paper by Walsham (1995) examines the nature and the method of interpretive approach by addressing some philosophical and theoretical issues concerning the nature of case studies in IS/IT research. He reviews some previous papers on the philosophical basis of interpretive research, and provides the methodological issues on the reporting and conduct of IS/IT research. Walsham examines the philosophical basis of interpretive approach from the

ethnographic research tradition in anthropology. He contents, this is a valuable stance to treat Interpretivism considering its underlying philosophical assumption applied to case studies. He references the writing of Van Maanen (1979) in the traditional of organizational ethnography. In this work, Van Maanen writes about the interviewee's constructions called as 'first-order' and the researchers' constructions as 'second-order' (Walsham, p. 75).

Walsham continues to write about the complexity of these constructions and thus the difficulty task of researchers to decode these constructed realities, and additionally the concept of 'thick description' as the second feature of the ethnographical tradition. Walsham describes 'thick description' as an important issue to understand, "…what is happening in connection with as complex computer-based information system, involving managers, users…" (p. 75). In other words, how to interpret the interactions between these groups of people, and in the case of this paper, an evaluation program, is very important. Walsham continues to note that interpretive researchers adapt human interpretations and meanings as the ontological position associated with the computer systems. The characterization of ontological and epistemological differences between Interpretivism versus positivism as their distinguishable philosophical features was, indeed, examined previously in this paper, e.g., the work of Guba and Lincoln (see Chapter 3) treats these concepts extensively, and here there is obviously no need to be duplicated.

Focusing on the conduct of interpretive evaluation approach (IEA) for appraisal of IS/IT investments, Walsham (1995) offers and thus discusses three sets of issues. These issues are:

I. involving the role of evaluator

II. interviewing techniques

III. reporting methods

Role of the evaluator, due to the complex nature of the multiple realities on the ground, the difficult task of interpretive researcher is to actively interact with the people and thus entering into their world. The aim of the interpretive researcher/evaluator is to gain access to other people's constructions/interpretations, decoding them through their own 'conceptual apparatus' (p. 77) and processing the events and thereafter feeding a version of perceived/interpreted reality back to others (i.e., researchers including in some cases audiences). It is important that evaluators are aware about their roles in evaluation of IS/IT investments that are indeed complex social processes. Walsham categorizes researchers as either 'Outside researcher' or as 'Involved researcher'.

Outside researcher and involved researcher are characterized by their distinctive roles described here; the role of 'Outside researcher' is being outside the process while the role of 'Involved researcher' (i.e., an involved evaluator) is being inside the process. The later role is played, "…through participant observation or action research" (p. 71). Walsham emphasizes that it is crucial to not viewing these roles as that of an objective evaluator, because the evaluation findings involves the interpretive evaluators' own subjectivity. He continues to write, the researcher's own subjectivity inevitably impacts the interpretations of the users of information systems who being evaluated, a process referred to as 'double hermeneutic'[6].

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[6] Interested readers can see, "The Constitution of Society" by Giddens A. (1984). Polity Press, Cambridge.

In the case of outside evaluator/researcher, the evaluator is limited and influences what is happening in the domain of evaluation if only she/he shares conceptions and interpretations with the people involved in the evaluation programs. Similarly, Ward and Daniel (2006) term 'Outside evaluator' as 'Informal evaluator' who has officially limited access to the subject program. But as Walsham notes, the personnel who are targeted for evaluation will be more frank (e.g., in term of expressing their distinctive views) with the outside researcher because the outside researcher in contrast to the inside researcher/evaluator has no personal stake in various interpretations and outcomes.

A final problem with the role of 'Inside evaluator' is the extremely difficulty to report the role that the individual users have played, considering the various matters. In his later paper, Walsham (2006) extends the notion of 'involved researcher' additionally and views involvement as 'spectrum' changing over time. At the one end of the spectrum he puts the aspect of what he calls a 'neutral' observer. But he emphasizes that neutrality doesn't mean pure facts, because we are all contaminated with our prejudices and different subjective views. Instead, he defines neutrality as a role of involved researcher which is perceived by people in the organization with no organizational interest as it is the case with consultants who work there to make money, or having strong prior views of people, organization, systems and processes based on their previous work in the organization.

At the other end of the involvement spectrum, the 'involved researcher' is in full action by trying deliberately and explicitly do the best things, things that feel and fit best (Walsham, 2006). He continues to note, there are many advantages of close involvement such as in-depth access to the people and making a valid contribution to the study program. As a disadvantage with the involved researcher, Walsham (2005) writes that in some cases many organizations do not permit close involvement. Walsham emphasize on the social skills of involved researcher who intends to make a contribution. It means, a skilled interpretive researcher will make a big difference. Interpretive research is concerned with an additional important issue which is ethical. Walsham maintains that IS literature needs to cover this issue thoroughly.

Interviewing techniques, concerning evidence from interviews, Walsham draws his writing on Yin (1989) who argues; "…that evidence for case studies many come from six sources: document, archival records, interviews, direct observation, participant observation, and physical artifacts" (Walsham, 1995, p. 78). Seen from the perspectives of both outsider and insider evaluators mentioned above, interviews are the primarily and rich data source through which evaluators can access to the interpretations and understandings of interviewees regarding their own views on, in the case of this paper, IS/IT investments.

Interviews are the important and rich data sources that interpretive evaluators use to examine, "…the interpretations of their fellow participants in some details" (p. 78). Walsham warns, if the evaluators control and direct interviews closely then there is always a risk to not enter the world of the interviewees and as a result losing much of the richness of interviewees' interpretations which are indeed the raw material of sensitive interpretive evaluation. If the evaluator is too passive and not prompting new questions or not challenging the interviewee or coming up with new ideas, she/he cannot thus direct the evaluation program and will be perceived by interviewee as either not being interested in their views and/or that the evaluator is incompetent to evaluate the subject of evaluation. Consequently, Walsham argues seeing this from the IS domain, it will damage the evaluator and thus jeopardize the future collaboration

with the research project. Walsham argues, besides the importance of good interviewing technique, it is more important to focus on how to access to people's constructions and views that require a skilled evaluator with social and personal sensitivity. Finally, evaluators should be constantly critical with respect to their own work and their peers' findings as well.

Reporting Methods, two key issues in reporting methods are credibility and validity of the finding. It is vital that evaluators establish some credibility to the reader that the findings are described in detail, and show how the evaluations have been conducted because, "Reporting on 'soft' human issues is not an excuse for sloppiness," wrote Walsham (1995, p. 79). Three minimum criteria, i.e., what, why, how, and the time span of evaluation are the minimum requirement to the reporting methods, argues Walsham.

Generalization of findings is a critical issue for evaluators of IS/IT investments. Walsham (1995, p. 79) describes four types of generalizations from interpretive evaluations described below:

1) the development of concepts

2) the generation of theory

3) the drawing of specific implications

4) the contribution of rich insight

All of these generalizations are indeed essential when conducting interpretive evaluation approach. Walsham writes about the other three in another context of IS/IT research (i.e., the relationship between design of IS and the development process and business strategy) that will not be discussed here. However, the fourth type of generalization (see number 4 above) is designed to capture insights from the reading of reports and findings from interpretive evaluations.

TABLE 3: SUMMERY OF SEVEN PRINCIPLES FOR INTERPRETATIVE EVALUATION FIELD RESEARCH FIELD (KLEIN AND MYERS, 1999)

Summary of Seven Principles for Interpretative Field Research	
The Fundamental Principle of the Hermeneutic Circle	This principle suggests that all human understanding is achieved by iteration between the interdependent meaning of parts and the whole they form. This principle of human understanding is fundamental to all the other principle
The Principle of Contextualization	Requires critical reflection on the social and historical background of the research setting, so that the indented audience can see how the current situation under investigation emerged.
The Principle of Interaction between the Researchers and the Subjects	Requires a critical reflection on how the research materials (or 'data') were socially constructed through the interaction between the researchers and the participants.
The Principle of Abstraction and Generalization	Requires relating the idiographic details revealed by the data interpretation trough the application of principles one and two to the theoretical, general concepts that describe the nature of human understanding and social action.
The Principle of Dialogical Reasoning	Requires sensitivity to possible contradictions between the theoretical preconceptions guiding the research design and actual findings ('the story which the data tell') with subsequent cycles of revision.
The Principle of Multiple Interpretations	Requires sensitivity to possible differences in interpretations among the participants as are typically expressed in multiple narratives or stories of the sequence of events under study. Similar to multiple witness account even if all tell it as they saw it.
The Principle of Suspicion	Requires sensitivity to possible 'biases' and systematic 'distortions' in the narratives collected from the participants

CHAPTER 5: IEA IN IS/IT EVALUATION LITERATURE

This chapter will examine what the main key concepts of IEA are, and thus how these concepts are discussed by mainly the current IS/IT evaluation literature. One of the focal important issues, which will be explored extensively here in this chapter, is the issue of the widely recognized contextual interpretive IS/IT evaluation framework known as CCP (i.e., CONTENT, CONTEXT and PROCESS) for evaluation of IS/IT investments. This along with some other important issues such as the different evaluation strategies for IEA aimed at enriching a deeper understanding of the interpretive evaluation approach (IEA) will be also examined here in the current chapter.

5.1 THE CONTEXTUAL INTERPRETIVE IS/IT EVALUATION FRAMEWORK (CCP)

To evaluate IS/IT investments effectively, many studies underline the importance of considering the complex socio-organizational criteria (e.g., Symons, 1991; Jones and Hughes, 1991; Serafeimidis and Smithson, 1994, 1996, 1999; Walsham, 1995, 2006; Hirschheim and Smithson, 1988; Cronholm and Goldkuhl, 2003; Bezzi, 2006; Stockdale and Standing, 2006; Remenyi and Sherwood-Smith, 1999) associated with the IS/IT evaluation.

To address above mentioned criteria, a large number of interpretive IS/IT evaluation researchers such as Symons (1991) writes about existing difficulties in IS/IT evaluation that are both conceptual and operational. These conceptual and operational issues in IS/IT evaluation have led to the further development of a contextual evaluation framework called CCP, i.e., Content, Context and Process, (Symons, 1991). This evaluation framework (i.e., CCP) is based on Contextualism of Pettigrew (1985). Following the work of Symons, many authors (e.g., Hirschheim and Smithson, 1988; Jones and Hughes, 1991; Walsham, 1995, 2006, Serafeimidis and Smithson, 1999; Klecun and Cornford, 2005; Stockdale and Standing, 2006; Lagsten and Karsson, 2006) have used this interpretive contextual framework for evaluation of IS/IT investments in different cases. However, in interpretive IS/IT literature there is indeed consensus about the content, context and process (CCP) framework found particularly in interpretive IS/IT-centric evaluation literature which will be studied thoroughly in this Chapter. Therefore, in the subsequent sections the interrelated concepts of contextual interpretive evaluation framework (CCP) will be examined in detail.

5.2 MULTIPLE STAKEHOLDERS

To evaluate effectively, a series of key socio-organizational issues such as the multiple roles of different group of stakeholders that indeed considered and thus incorporated into the process of interpretive approach for evaluation of IS/IT investments are recognized by many interpretive IS/IT evaluation articles (e.g., Serafeimidis and Smithson, 1994, 1996; Avgerou, 1995; Remenyi and Sherwood-Smith, 1999; Serafeimidis et al., 1996; Fitzgerald, 1998; Mitev, 2000; Cronholm and Goldkuhl, 2003) to be at core of IEA. Thus, one of the main important issues raised by these articles is the issue of stakeholders; their various concerns, claims and issues. IEA acknowledges the users of IS/IT as one of the main important group of stakeholders, and seeks to understand their diverse situations (Miskelly et al., 2004). The IS/IT value or as Ward and Daniel (2006) describe, the business benefit gained from a IS/IT investment is an advantage on behalf of a stakeholder.

Within the management or organizational context, there are many studies that deal with the stakeholder theory viewed as an organizational lifecycle approach (e.g., Jawahar and McLaughlin, 2001). The concept of stakeholder, there are many managerial strategies to facilitate the various claims, concerns and issues of different group of stakeholders (Freeman, 1984). According to Freeman (1984, p. 46), "a stakeholder in an organization is any group or individual who can affect or is affected by the achievements of the organization's objectives." The use of stakeholder approach liked to strategic management is suggested by many interpretive IS/IT evaluation researchers to be satisfyingly a more complete basis for analyzing the impact of IS/IT at the firm, industry and societal levels (e.g., Gupta, 1995).

In interpretive IS/IT evaluation articles there are many arguments that advocate for the involvement of the different group of social actors (this is stakeholders and evaluators) in order to capture, particularly, the social outcomes of IS/IT investments (e.g., Symons, 1991, Stockdale and Standing, 2006). Thus, there have been many calls (e.g., Guba and Lincoln, 1989; Smithson and Hirschheim, 1998; Serafeimidis and Smithson, 1999; Frisk, 2004; Abu-Samaha1 and Mansi, 2004) for shifting towards conducting a rigorous evaluation approach that reflects the concerns of all involved stakeholders. Bannister et al. (2004) with many other interpretive IS/IT researchers argue that evaluating a new investment is always a political process as long as it concerns diverse stakeholder groups. Seddon et al. (1997, 1999) realized the importance of stakeholders and emphasized on their link to the evaluation program. These authors have summarized many important aspects associated with the active involvement of different group of stakeholders.

According to Guba and Lincoln (1989), stakeholders as groups at risk are characterized by; firstly, their rights to articulate various claims, concerns, values and judgments, secondly, their openness to exploitation, disempowerment and disfranchisement, and thirdly, stakeholders are users of evaluation information. Stakeholders as the users of information are responsive to their claims, concerns, and the issues they have and must be given the opportunity to have input into the evaluation process, and "…having those inputs honored… they also see a way to flex their political muscles and, legitimation that they would not have otherwise" (p. 54). Moreover, the stakeholders are capable to enlarge or broaden the range of the "…evaluative inquiry to the great benefit of the hermeneutic/dialectic process" (ibid).

Claims, concerns and issues vary with the degree of constructed realities or constructions built by stakeholders. These constructions reflect the stakeholders' particular "…circumstances, experiences, and values" (p. 55). Guba and Lincoln argue, the stakeholders would be mutually educated by the fourth generation process (see Chapter 3). It means the evaluation findings, even when conducted, are hardly accepted by everyone (ibid). There are always risks or "…opportunity to attack evaluation findings" (p. 56).

The IEA encourages and empowers each stakeholder group to understand both own and other groups' constructions. Understanding other involved groups' constructions doesn't necessarily imply reaching some agreements, "…but it doses mean gaining superior knowledge of the elements included in others' constructions and superior understanding of the rationale for their inclusion" (pp. 56-57). Finally, above arguments are seem to be "…compelling reasons for insisting upon the use of stakeholder claims, concerns, and issues as focal organizers for evaluation…" (p. 57).

In addition to above definition of stakeholders, Hirschheim and Klein (1989) define stakeholders composed of a diverse group of individuals (i.e., users, owners of the productive resources, and heterogeneous levels of management) existing within a complex and intertwined set of social relationships and interactions. In the IEA, the active participation of a wide range of stakeholders is essential to this approach (Cronholm and Goldkuhl, 2003). This notion of active participation of stakeholders, were recognized by Miskelly et al., (2004) as an important factor when they conducted IEA and reported that this was led to an effective evaluation result and better understanding of IS/IT in use.

The involvement of a wide range of stakeholder groups is essential to this approach of evaluation. Considering the stakeholder-oriented aspect of interpretive approach, the process of evaluation can be also a practical obstacle because the set time and resources for the evaluation are short and limited (e.g., Serafeimidis and Smithson, 1996).

5.3 THE CONTENT OF EVALUATION

The use of CCP evaluation framework addresses 'WHAT' to be measured, by 'WHOM' and for what 'PURPOSE' (e.g., Symons, 2001). Interpretive IS/IT evaluation literature emphasizes the 'WHAT' of evaluation considered to be a crucial factor during the IS/IT evaluation processes or evaluation strategies (Cronholm and Goldkuhl, 2003). What is being measured is very important because it deals with measuring both tangible and intangible business benefits/outcomes of the IS/IT investments.

The content refers to the values and criteria to be considered and "WHAT" should be measured (Serafeimidis and Smithson, 1994, 1996). According to these authors (Serafeimidis and Smithson, 1996), it is particularly important to look beyond the narrow quantification of costs and benefits to an analysis of the opportunities presented by IS/IT investments. Indeed, the interpretive IS/IT evolution authors have criticized the traditional financial evaluation approaches and their various associated methodologies to not considering information systems/technologies as social systems and thus fail to capture the intangible business benefits/outcomes of IS/IT investments (e.g., Symons, 1991; Jones and Hughes, 1991; Hirschheim and Smithson, 1988; Walsham, 1995, 2006, Serafeimidis and Smithson, 1999). In other words, financial approaches and their associated evaluation methodologies can hardly identify the intangible part of WHAT to be evaluated (e.g., Symons, 1991).

The measurement or evaluation of 'What' extends beyond narrow costs and benefits; it involves relevant criteria and values such as the notions of risk and links to organization's strategy (Smithson and Hirschheim 1998; Cronholm and Goldkuhl, 2003). This together with the potential constraints on the application of IS/IT investments are very important to be taken under great considerations (Serafeimidis et al., 1996). According to Serafeimidis and Smithson (1996) the content emphasizes the values and risks of information systems and their contribution to business objectives and organizational efficiency. Thin including the linkage to organizational goals and a consideration of the implementation process are very important to be addressed (Cronholm and Goldkuhl, 2003).

5.4 THE CONTEXT OF EVALUATION

The context of evaluation concerns with the multi-level identification of the various IS/IT investments within which the organization is located (Serafeimidis and Smithson, 1996). The context may refer to the social-political, economic or competitive environment in which an organization operates and/or the organizational structure, corporate culture, or internal political context (ibid). Various stakeholder groups, both internal and external, should be identified together with the processes and tasks with which they are involved (e.g., Guba and Lincoln, 1989; Serafeimidis and Smithson, 1996).

The context of evaluation involves the consideration of questions such as 'WHY' is it necessary to evaluate and by 'WHOM' (Smithson and Hirschheim 1998; Stockdale and Standing, 2006). An evaluation context can be influenced by both inner/organizational and outer/external factors (ibid). As an example, the role of stakeholders as an inner-organizational factor will influence and be influenced by the evaluation process and its outcomes (e.g., Guba and Lincoln, 1989; House, 1980; Cronholm and Goldkuhl, 2003; Remenyi and Sherwood-Smith, 1999; Serafeimidis and Smithson, 1996, 1998, 1999, Smithson and Hirschheim, 1998; Walsham, 1993, Symons, 1991; Jones and Hughes, 2001).

Another question that can be asked here is the 'PURPOSE' of evaluation. The purpose of evaluation can reshape the organization's political structure (e.g., Guba and Lincoln; Avgerou, 2001). The purpose of evaluation is widely recognized to evaluate values of IS/IT investments, whether done formally or informally. The organizational and external factors continuously interact with each other (e.g., Symons, 1991; Smithson and Hirschheim 1998; Stockdale and Standing, 2006).

As it was explored in Chapter 4, one important inner/organizational aspect is the notion of 'understanding' embedded in the context in which the possibility of stakeholders' own constructions make sense (Guba and Lincoln, 1989). In other words, the interpretive/hermeneutic approach ensures that all understanding takes place in context. All interpretive methodologies drawn on interpretive/hermeneutic approach must allow for a world in which different constructions and meanings of involved people emerge from and respond to the context (Guba and Lincoln, 1989). What is being measured is very important because it deals with measuring both tangible and intangible business benefits/outcomes of the IS/IT investments. Indeed, the interpretive IS/IT evolution authors have criticized the traditional financial approaches to not capturing the intangible business benefits/outcomes of IS/IT investments (e.g., Symons, 1991; Jones and Hughes, 1991; Hirschheim and Smithson, 1988; Walsham, 1995, 2006, Serafeimidis and Smithson, 1999). As said earlier, financial approaches and their associated evaluation methodologies can hardly identify the intangible part of WHAT to be evaluated. These include the linkage to organizational goals and a consideration of the implementation process (Cronholm and Goldkuhl, 2003).

In the interpretive IS/IT evaluation literature, the internal and external organizational contexts that influence an IS/IT evaluation have been discussed by interpretive IS/IT evaluation researchers. However, the internal organizational contexts such as: organizational structure (Irani and Love, 2003; Symons, 1991; Willcocks, 1992); organizational goals and strategies (Mirani and Ledere, 1998; Huerta and Sanchez, 1990; Cronholm and Goldkuhl, 2003; Serafeimidis and Smithson, 1996); organizational culture (Irani and Love, 2001; Willcocks and Lester, 1996);

36

political structure (Farbey et al., 1995; Huerta and Sanchez, 1990; Guba and Lincoln, 1989; Serafeimidis and Smithson, 1996) or hierarchical structures (e.g., management structures and social structures and processes) discussed by Jones and Hughes (2001) and Ward et. al., (1996) and Willcocks (1992) are some inner or organizational contexts that influence an IS/IT evaluation.

External organizational influences on the context in an IS/IT evaluation, there are also external organizational contexts such as; social, political, economic and technological factors including: national economic situation, competitive environment, cultural influences (Huerta and Sanchez, 1999; Jones and Hughes, 2001; Remenyi and Sherwood-Smith, 1999; Serafeimidis and Smithson, 1999, 2000; Smithson and Hirschheim, 1998; Symons, 1991; Cronholm and Goldkuhl, 2003) and technological developments (Gupta, 1995) that effect the IS/IT evaluation outcomes.

The WHY of evaluation, there are many 'why-questions' such as: ritualistic evaluation reasons that reinforce existing organizational structures (e.g., Walsham, 1993); systems to participate in current business process, which means justification outweighs need to evaluate, (Powell, 1992); hoop jumping exercise, which means ritual rather than effective process, (Farbey, et al. 1999); project closure, which means not an opportunity for improvement, (Remenyi and Sherwood-Smith, 1999). Moreover, 'budgetary process' that gives 'a final yes or no-pass or fail-verdict' especially manufacturing-focus on justification rather than constructive evaluation argued Irani and Love (2002, p. 76).

There are additionally some value reasons for IS/IT evaluation such as appraisal of value; measure of success and recognition of benefits that lead to: improvement in business goals, organizational effectiveness, investment management (e.g., Guba and Lincoln, 1989; House, 1980; Cronholm and Goldkuhl, 2003; Remenyi and Sherwood-Smith, 1999; Serafeimidis and Smithson, 1999, Smithson and Hirschheim, 1998), and also problem diagnosis discussed by Symons (1991) along with consensus achievement (Farbey et al., 1999; Remenyi and Sherwood-Smith, 1999; Serafeimidis and Smithson, 1999).

This with decision-making, understanding risk and gains in organizational and personal learning are some other logical rationale reasons or 'why-questions' behind the value reasons for evaluation of IS/IT investments (e.g., Remenyi and Sherwood-Smith, 1999; Serafeimidis and Smithson, 1998, 1999; Smithson and Hirschheim, 1998; Mirani and Lederer, 1998; Guba and Lincoln, 1989).

5.5 THE PROCESS OF EVALUATION

The CCP or contextual interpretive evaluation framework (i.e., *CONTENT*, *CONTEXT* & *PROCESS*) has been used by many interpretive IS/IT evaluation researchers (e.g., Symons, 1991; Walsham, 1993; Serafeimidis and Smithson, 1994). As an example, Walsham has used CCP in a detailed analysis of three case studies. Guba and Lincoln (1989) determine that, "The process of IS evaluation involves a discourse, often mediated by formal procedures, but in the context of informal stakeholder assumptions," (p. 179). According to Mitev (2000), interpretive approaches provide a rich understanding of the IS/IT context and the process by which actors base their interpretations on the elements of context.

Stakeholders as the initiators of the evaluation influence the IS/IT evaluation process (e.g., Vetschera and Walterscheid). The evaluator task is a deep understanding of the different group of stakeholders' perspectives on the IS/IT evaluation (Guba and Lincoln, 1989; Serafeimidis and Smithson, 1994, 1996, 1998). The stakeholders' conflict can be used to inform the evaluation process (Farbey et al., 1999; Guba and Lincoln, 1989; Walsham, 1993). The identification of a range of interested parties and effective analysis of their inputs are seen to be problematic, argued Serafeimidis and Smithson (1998). On the contrary, subjectivity-differences of opinion can be seen as rich source of the evaluation data (Belcher and Watson, 1993, Guba and Lincoln, 1989). Moreover, there are also issues of human intuition and understanding of politics. According to Walsham (1993), moral agent stakeholder conflict interpretation along with the need to recognize different stakeholder perceptions of benefit (Smithson and Hirschheim, 1998).

According to Symons (1991) the process of organizational change is drawn on a chain of interrelated actions and reactions of different interested groups. In IS/IT investments this includes evaluation by managers, IS/IT evaluators (professionals) and users at all stages of development of IS/IT and operation (ibid). Any effective evaluation process besides focusing on value assumptions must focus on organizational policy as well (ibid). Moreover, Symons argues on the process view evaluation must comprise multiple stages running through the whole systems development cycle. Guidance on the process of IS/IT evaluation should require information to explain the 'HOW' of evaluation, writs Symons (1991). The 'HOW' of evaluation is managed by the joint work of evaluators, different group of stakeholders and the program manager (e.g., Serafeimidis and Smithson, 1994). A large number of IS/IT evaluation literature reports the examination of 'HOW' of evaluation incorporated in different evaluation methodologies (Stockdale and Standing, 2006) and strategies is essential for an effective conduct of interpretive IS/IT evaluation approach.

Here I will additionally explore the process of evaluation derived from the work of Guba and Lincoln (1989, p. 185) who wrote:

> *Fourth generation evaluation is a marriage of responsive focusing-using the claims, concerns, and issues of stakeholders at the organizing elements-and constructivist methodology-aiming to develop judgmental consensus among stakeholders who earlier held different, perhaps conflicting, emic constructions.*

As I explored previously in Chapter 4, Guba and Lincoln gave many reasons behind their use of stakeholder claims, concerns, and issues (hereafter referred to as CC&I) as organizers and the constructivist world's view as the methodological generator. The effort to devise joint, collaborative, or shared constructions encourages and appreciates inputs from many stakeholders and allows them a measure of control over the nature of evaluation activity. This attitude is thus both educative and empowering, while fulfilling all the usual acceptations of conducing an evaluation, primarily value judgment. The emic created constructions of stakeholders are taken seriously by the relativist ontological position of constructivism as legitimate claims and not as biased perceptions (Guba and Lincoln, 1989).

Among other interpretive IS/IT evaluation authors, Cronholm and Goldkuhl (2003) agree that the decision of how to perform evaluation is depending on the context of evaluation. Cronholm and Goldkuhl, 2003 suggest three general strategies to perform and thus facilitate the HOW of evaluation along with two strategies concerned with the WHAT of evaluation.

Considering the questions of WHAT and HOW of IS/IT evaluation, Cronholm and Goldkuhl (2003) derive a two dimensional matrix of WHAT to be evaluated and HOW to evaluate IS/IT investments shown in Table 4 below.

TABLE 4: THE MATRIX OF SIX GENERIC TYPES OF INFORMATION SYSTEMS EVALUATION (CRONHOLM AND GOLDKUHL, 2003)

Characterization of six generic types of evaluation		
	IS/IT as such	**IS/IT in use**
Goad-based evaluation	Type 1	Type 2
Goal-free evaluation	Type 3	Type 4
Criteria-based evaluation	Type 5	Type 6

Combining these two dimensional matrix shown in Table 4 above results in six generic evaluation types that each of which aims to support different choices of how to facilitate evaluation in various situations, wrote Cronholm and Goldkuhl (2003). In other words, depending on the different evaluation situations each of these generic types can be applicable. Three strategies concerning HOW of evaluation are:

❖ Goal-based evaluation
❖ Goal-free evaluation
❖ Criteria-based evaluation

Each of above evaluation strategies will be drawn on the WHAT of or what drives evaluation. Goal-based evaluation will be triggered by the explicit goals from organizational context. Whereas, the goal-free evaluation refers to evaluation of IS/IT investments that is not necessarily drawn on the explicit organizational goals. This is an inductive and situation-driven strategy. The criteria-based evaluation strategy means that there are some salient loose criteria for evaluation but these criteria are not restricted to the notion of or organizational context.

Similarly, Walsham (1993) and Patton (1990) write that goal-based evaluation is viewed as to achieve its initial evaluation objectives. The traditional view on goal-based evaluation is to appraise the harder measureable goals. But Cronholm and Goldkuhl (2003) argue there is no imperative relationship between goal-based evaluation approach, and the quantitative process. On the contrary, to judge if the evaluation goals are achieved it must be evaluated with the qualitative process. While the qualitative strategy searches to answer if and what specific evaluation goals are fulfilled, the quantitative strategy, besides the "if" and "which" questions, emphasizes on the rich description of the socio-organizational outcomes of IS/IT investments and thus evaluate these factors in terms of soft or intangible metrics (ibid).

According to Cronholm and Goldkuhl (2003) the basis strategy of this approach, which is deductive, is to evaluate if predefined goals are reached or not; to WHAT extent and in WHAT

ways. The measurement of WHAT factor depends on the pre-described goals or evaluation objectives that can be measured both by quantitative and qualitative approaches. According to (e.g. Remenyi, 1999; Walsham, 1993) the second identified goal-free approach is more interpretive by nature. As it was reviewed previously in this paper, the aim of interpretive evaluation is to enrich a deeper understanding of the nature of WHAT is to be evaluated and to generate the motivation and commitment behind evaluation (Hirschheim & Smithson, 1988).

Patton (1990) defines goal-free evaluation as gathering data on a broad array of actual effects and measuring the importance of these effects to meet demonstrated needs. The evaluator makes a deliberate attempt to avoid all rhetoric related to program goals; no discussion about goals is held with staff; no program brochures or proposals are read; only the program's outcomes and measurable effects are studied (Cronholm and Goldkuhl, 2003). The aim of goal-free evaluation is to avoid risk of narrowly studying stated program objectives and thereby missing important unanticipated outcomes (Patton, 1990).

Criteria-based evaluation, there are many important criteria to be addressed such as checklists and the criteria of user-interaction with the IS/IT system. Due to different contributions of IS/IT investments to an organization, many IS/IT researchers argue that evaluation should be based on different criteria (e.g., Parker et al., 1998; Weill and Olson, 1989). In their comparative review of different IS/IT evaluation methodologies, Renkema and Berghout (1999) describe the logical rationale reason behind the used of multi-criteria-based IS/IT evaluation approach. They write that due to difficulty of measuring the social/intangible business benefits or non-financial consequences of IS/IT investments, the multi-criteria approach can solve this problem, and it is used as in many decision making problems. Cronholm and Goldkuhl (2003) write about two different strategies to facilitate WHAT of evaluation or WHAT to be evaluated. These two strategies are evaluating *IS/IT as such* and *IS/IT in use*.

The authors maintain that evaluation of IS/IT can be addressed from many different perspectives. Cronholm and Goldkuhl (2003) argue that their evaluation framework is not dependent on any specific perspective. The strategy of what to be evaluated in 'IT-system as such' is that the evaluator evaluates the system without cooperation or involvement of the user of the IS/IT. Conducting this evaluation strategy does not exclude any of how to evaluate any of the goal-based evaluation, goal-free evaluation and criteria-based evaluation strategies. The evaluator is free to choose any of these strategies or mix them to cover what and who of evaluation. The 'IS/IT as such' (see Figure 4) which emphasizes only on the role of evaluator and not the user's perception of IS/IT, aims to investigate how the IS/IT support or is beneficial for the organization.
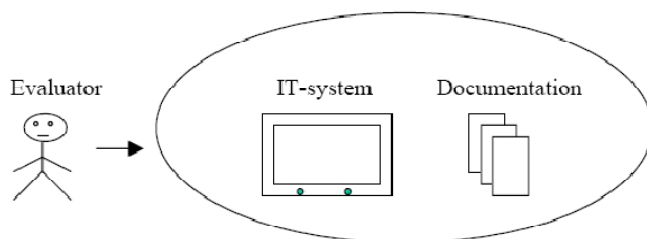

FIGURE 4: THE POSSIBLE DATA SOURCES FOR EVALUATION OF IS/IT AS SUCH (CRONHOLM AND GOLDKUHL, 2003)

As it can be seen from Figure 4 above, the evaluator enters the evaluation process and the only possible data sources for evaluation are; the IS/IT itself and the previous documentation.

IS/IT in use, the other evaluation strategy of "what to evaluate" is 'IS/IT in use' shown in Figure 5 below, which in contrast to the IS/IT as such, incorporates the user's perception, concern and claims into the evaluation strategy during the evaluation IS/IT. Cronholm and Goldkuhl (2003) write that this strategy is more complex then 'IS/IT as such'. Because it considers the user of the system but at the same time gives a richer picture of the IS/IT investments.
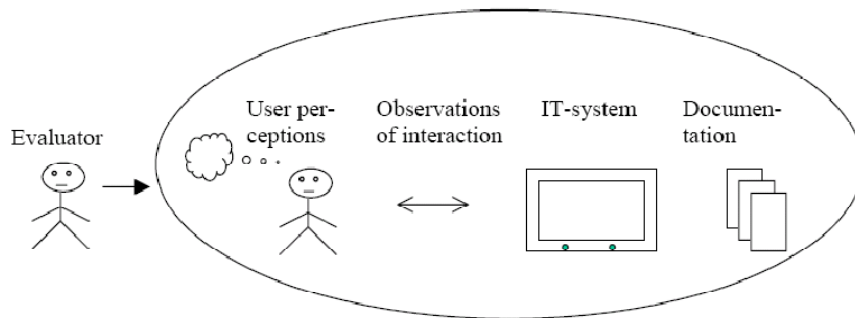

FIGURE 5: THE POSSIBLE DATA SOURCES FOR EVALUATION OF IS/IT IN USE (CRONHOLM AND GOLDKUHL, 2003)

As it is shown in Figure 5 above, the task of evaluator, in the case of 'IS/IT in use', is more complex then the role of evaluator who is involved in the process of evaluation when implementing the evaluation strategy of 'IS/IT as such'. In the case of IS/IT in use, there are issue of the user and her/his world's view and interaction with the IS/IT, and also the issues of the IS/IT system and documentation. One important aspect of this strategy is the subjectivity of the user's view regarding her/his interaction with the system. According to Cronholm and Goldkuhl (2003), the attitude of the users, among many other perceptions, toward the IS/IT is harder to measure. This social aspect is indeed discussed by many interpretive authors. User in this case interacts with the IS/IT and can influence and also will be influenced by the information systems in use.

Table 4 above is the combination of two approaches of "WHAT" or "what to evaluate" with three approaches of "HOW" or "how evaluate" that together produces a matrix of six generic types of evaluation. Derived from Table 4 above, Cronholm and Goldkuhl (2003) characterize and thus discuss similarities and differences between those six different generic types of evaluation based on some general criteria that are:

- *Main perspective*
- *What to achieve knowledge about*
- *Data sources*
- *Deductive or inductive*
- *Who will participate*
- *When to choose this type*

Furthermore, the authors describe and thus give an example for each of these types of evaluation and additionally show how they can be deployed. Serafeimidis et al. (1996) argue due to subjectivity of evaluation of information systems and also considering the conflicting views of

41

different group of stakeholders on value of information systems, evaluation is always information intensive. Serafeimidis et al. (1996) have a similar view with Guba and Lincoln (1989) who wrote that different interpretations of evaluation process originated from stakeholders makes evaluation to become "Value-laden". These authors argue that the evaluation process of information systems will be influenced by political aspects of the organizational environment. Gupta (1995, pp. 5-6) refers to the three-step framework developed by Mallott (1990) for deploying the strategic panning process which is drawn on the stakeholder analysis concept. The three-step process described below is as follows:

1. *Identify and specify the stakeholders and their interests, domain and specificity.*

2. *Identify and describe the relationships between the stakeholders and the firm, and among the stakeholders. Include power relationships.*

3. *Incorporate the concepts of action and time. Construct stakeholder and successive stakeholder maps.*

5.6 THE INTERPLAY BETWEEN MAIN CONCEPTS

Serafeimidis and Smithson (1994) have adopted Pettigrew's Contextualism (i.e., Content, Context and Process) to create an operational framework for the evaluation of IS/IT. This evaluation framework is used to facilitate the understanding of the evaluation of IS/IT investments. These authors (Serafeimidis and Smithson, 1994) refer to these three concepts (this is Content, Context and Process) as three principles aimed to provide some recommendations for the process and content of evaluation in sufficient detail and rigor such that the feedback information can be the basis of decision making or learning, rather than simply supporting the "HOW" and "WHAT" of evaluation. Considering the interpretive contextual evaluation framework, there is an interactive linkage between the 'Process' and 'Content' of the evaluation that together produce or generate the outcomes of evaluation. Moreover, the interplay between the "Content" and the "Process" and consequently the evaluation outcomes are surrounded by other important evaluation factors shown in Figure 6 below.
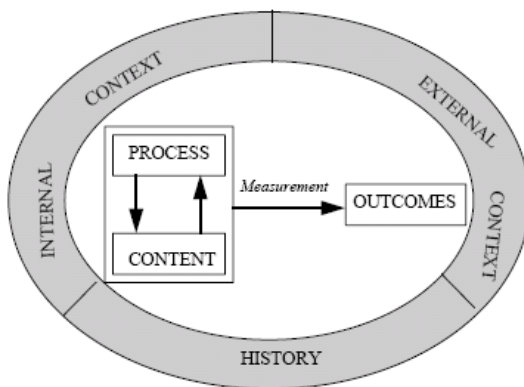

FIGURE 6: AN INTERPRETIVE FRAMEWORK FOR IS EVALUATION (SERAFEIMIDIS AND SMITHSON, 1996)

The process of evaluation will be triggered by the techniques and methods used to conduct the evaluation. Furthermore, the process relates to the IS/IT planning, decision-making, development and project management methods and techniques (Serafeimidis and Smithson, 1996). It is also important to establish a functioning communication channel with all the stakeholders involved in the IS/IT development, evaluation and other managerial activities to contribute to individual as well as organizational learning (e.g., Guba and Lincoln, 1989; Serafeimidis and Smithson, 1996).

The aim of interaction with other management activities should be to provide help for realization of IS/IT business benefits in particular. Fitzgerald (1998) views the process of evaluation from the perspective of realization of IS/IT investments benefits. To realize benefits from IS/IT deployments, Fitzgerald writes about the process of "efficiency projects" which is done by considering the internal organizational criterion (i.e., concept, implantation and benefit reduced costs). And for "effectiveness projects" as second criterion, he combines the mentioned internal factor with an external (i.e., effect on environment and behavior change) organizational criteria for realization of IS/IT benefits. To perform and facilitate the process of IS/IT evaluation, the author (Fitzgerald 1998, p. 26) argues that, "The establishment of the evaluation facilitator role in the organization is important in this respect."

A historical understanding of all the above conceptual elements is necessary because IS/IT changes and their evaluation (including learning from failures) evolve over time and, at any particular point, present a series of constraints and opportunities shaped by previous history (Serafeimidis and Smithson, 1996). Two conceptions of history; one as a narrative succession of significant events and the other as a proximate (immediate) history of social phenomena and the effects of their long-term history on organizational practices have been adapted by Serafeimidis and Smithson (1996).

However, beside the importance of the interpretive contextual evaluation framework (CCP), an earlier paper by Serafeimidis and Smithson emphasizes (1996) argues that it is important to differentiate between the acts, processes and purposes of evaluation at various stages of the life-cycle of an IS/IT investment project for operationalization of these concepts (i.e., Content, Context and Process) shown in Table 5 below.

TABLE 5: CONTENT, CONTEXT AND PROCESS OF IS/IT INFRASTRUCTURE EVALUATION (SERAFEIMIDIS AND SMITHSON, 1996)

Theoretical concepts	Evaluation activities
Content	Value tracking Evaluation goals Project classification Metrics and measures
Context	Stakeholder map Organizational chart Business process model Corporate information and information flows Organizational planning Competing and linked projects Economic, political, and social context
Process	Methods and techniques Alignment and matching Learning mechanisms
History	Prior experience in evaluation Familiarity with the use of methods and techniques

The process or the 'HOW-question' of interpretive evaluation approach was explored previously in Chapter 3 of this paper. Thus, drawn on the work of Guba and Lincoln (1989), Table below 6 below shows other considerations and issues related to the 'HOW' of evaluation discussed extensively in this section of the text. In other words, here I will additionally explore the process of evaluation derived from the work of Guba and Lincoln (1989, p. 185*) who wrote:

> *Fourth generation evaluation is a marriage of responsive focusing-using the claims, concerns, and issues of stakeholders at the organizing elements-and constructivist methodology-aiming to develop judgmental consensus among stakeholders who earlier held different, perhaps conflicting, emic constructions.*

The linkage between process-oriented and context-based of IS/IT evaluation has been used by Kefi (2002) in a case study which shows the importance of linking process-oriented evaluation of the IS/IT with the contextual properties. The perceived performance (at IS/IT level); application types (at individual level); organizational changes (at organizational level) linked to strategic/organizational context and context of development/use both at contextual properties,   are argued by Kefi (2002) to be the process-oriented and context-based model of IS/IT evaluation.

As I explored previously in Chapter 3, Guba and Lincoln gave many reasons behind their use of stakeholder claims, concerns, and issues (hereafter referred to as CC&I) as organizers and the constructivist world's view as the methodological generator. The effort to devise joint, collaborative, or shared constructions encourages and appreciates inputs from many stakeholders and allows them a measure of control over the nature of evaluation activity. This attitude is thus both educative and empowering, while fulfilling all the usual acceptations of conducing an evaluation, primarily value judgment. The emic created constructions of stakeholders are taken

seriously by the relativist ontological position of constructivism as legitimate claims and not as biased perceptions (Guba and Lincoln, 1989). Guba and Lincoln provide a set of operational guidelines to conduct the methodology of interpretive evaluation shown in Table 6 below.

TABLE 6: TWELVE STEPS OPERATIONAL GUIDELINES FOR CONDUCTING THE METHODOLOGY OF IEA (GUBA AND LINCOLN, 1989)

Steps	Guidelines
1	Initiating a contract with the client or sponsor commissioning the evaluation
2	Organizing the evaluation
3	Identifying stakeholders
4	Developing within-stakeholder-group joint (collaborative, shared) constructions via the hermeneutic/dialectic circle process, specifically focusing on claims, concerns, and issues
5	Testing and enlarging within-group constructions by introducing new or additional information and by enabling group members to achieve higher levels of sophistication in dealing with such information
6	Sorting out resolved CC&I-those on which consensus has been achieved
7	Prioritizing unresolved CC&I
8	Collecting information bearing on unresolved CC&I
9	Preparing an agenda for negotiation
10	Carrying out a negotiation
11	Reporting via the case study-the joint construction as product
12	Recycling

The set of twelve guidelines shown in Table 6 above is grounded in the principle of the hermeneutic dialectic circle, as outlined previously in Chapter 3. Thus, the authors (Guba and Lincoln, 1989) write the evaluator should decide where to start and how to use and adapt these steps. The authors emphasize this model is interative in nature and should be cycled and recycled until the final result is reached.

5.7 INTEGRATION OF CCP FRAMEWORK

The interpretive IS/IT evaluation framework called CCP (i.e., Content, Context and Process) should be seen as interlinking aspects that capture rich data based on the interpretive evaluation approach (IEA). These important concepts are further narrowed down as substructures to address many key factors such as WAHT, WHY, WHO, HOW and WHEN of evaluation. Stockdale and Standing along with other authors (e.g., Jones and Hughes, 1991; Serafeimidis and Smithson, 1996) argue these factors (see Figure 7) will be affected by different perceptions of stakeholders involved. Considering to evaluate IS/IT investments effectively, there are many calls in literature

for utilization of informal (e.g., Farbey et al., 1999; Jones and Hughes, 2000) evaluation findings seen as essential elements that enrich the understanding of evaluation as a profession. Based on a vast body of evaluation literature, Stockdale and Standing (2006) argue the CCP framework is well-developed and it just needs to be used in different case studies in order to be evaluated.
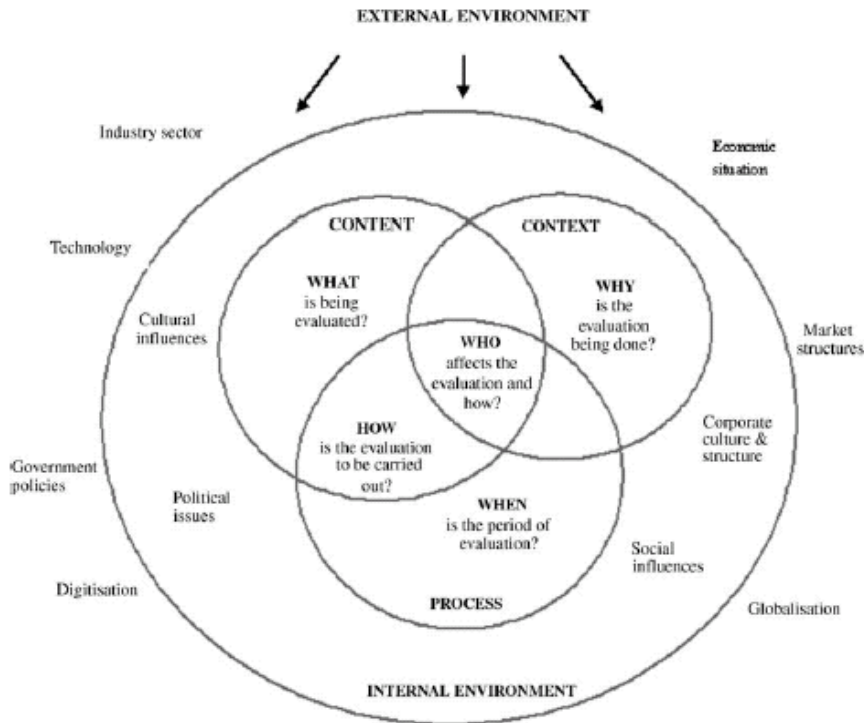

FIGURE 7: THE CONTENT, CONTEXT AND PROCESS FRAMEWORK (STOCKDALE AND STANDING, 2006, P. 1097)

5.8 OTHER INTERPRETIVE IS/IT EVALUATION APPROACHES

Knowing the existence of a variety of interpretive evaluation approaches discussed by IS/IT evaluation literature, 'formative approach' is classified as one of those interpretive evaluation approaches (Berghout and Remenyi, Dan, 2005) used by many IS/IT researchers for evaluation of IS/IT investments (e.g., Remenyi and Sherwood-Smith, 1999; Remenyi et al., 1997). According to Remenyi et al., (1997, p. 6), "…formative evaluation is a process whereby all the relevant stakeholders may contribute their views and values as to how the proposed system should be developed."

To evaluate the deployments of IS/IT and their use in organizations, Klectun and Cornford (2005) suggest a critical evaluation approach that takes under account social, political and historical perspectives. They argue critical evaluation approach recognizes the historical condition under which these systems (IS/IT) are constructed and used. Critical approach acknowledges the new organizational 'created' political power in term of new relationships and constraining structures that limit people's understanding and the choices available to them, argued Klectun and Cornford (2005).

The critical evaluation approach recognizes the evaluation process itself will be affected and constrained by the vested interests/benefits in organization, because evaluation, potentially,

redistributes power. Evaluators should consider how their activities/roles reshape the existing organizational relationships. In these terms, evaluation is always problematic and a political act, but through reflective engagement with the subject and the communicative action among stakeholders, it can lead to more profound learning and serves the goal of release. Klectun and Cornford (2005) have summarized four evaluation approaches. As an example, the authors (Klectun and Cornford, 2005) discuss critical evaluation approach (CEA) drawn on social theory. In doing so, the authors have chosen to combine elements of hermeneutic/constructivist/interpretive and socio-technical positions. Their interpretation of critical evaluation approach is encapsulated in a set of five principles indicating in each case what each and one of these principles might imply in different practical situations.

Klectun and Cornford (2005) argue that all social phenomena and IS/IT alike are socially and historically determined. They continue to write that their interpretive proposed evaluation programme is drawn on such broad assumption, and maintain any evaluation activity should both reflect and respond to these conditions.

Moreover, Klectun and Cornford write that neither IS/IT nor evaluation criteria and appraisal processes that are applied to them are neutral. Therefore, the authors see evaluation as inherently political. They (Klectun and Cornford, 2005, p. 240) describe, "In this sense we see evaluation as inherently political, a contested domain where contentious ideas are put in play." Furthermore, drawn on critical evaluation theory, the work of these authors (Klectun and Cornford, 2005, p. 240) seeks to emphasize the reflexivity which is or should be at the heart of evaluation process, and gives, "…a new emphasize to evaluation activity through a questioning of common assumptions and beliefs, and an acknowledgement of the embedded and sedimented power relations and vested interests that evaluation might, with benefit, uncover."

CHAPTER 6: DISCUSSION

Derived from the literature review explored in the previews chapters, the main underlying philosophical assumptions and the central theoretical concepts of interpretive evaluation approach (IEA) will be discussed critically here in this chapter. Furthermore, I will discuss some important interpretive IS/IT evaluation issues such as four success factors that are empowering the participation of multiple stakeholders in the evaluation process. Finally, I'll discuss some interpretive IS/IT evaluation challenges aimed at facilitating a greater conceptual understanding of IEA and also to capture the intangible business benefits and social outcomes of IS/IT deployments.

6.1 THE MAIN CONCEPTS OF IEA

After reviewing interpretive evaluation approaches aimed to investigate the research questions of this master's thesis, this chapter will thus discuss critically the reviewed underlying philosophical assumptions and the main theoretical concepts of interpretive evaluation approach (IEA) for evaluation of IS/IT investments. It will discuss those main salient philosophical assumptions and intrinsic theoretical concepts that were argued to be at the core of interpretive evaluation approach (IEA). Theorizing IEA will help to both design rigorous and appropriate interpretive IS/IT evaluation methodologies, and also better comprehending and thus facilitating the IEA during the evaluation process of IS/IT investments. In the previous chapters, the research questions of this thesis were studied from three interrelated evaluation discourses referred to as: firstly, evaluation as a profession or field of inquiry, secondly, IS/IT research, and thirdly, interpretive IS/IT evaluation field.

As Walsham (1995, 2006) noticed, interpretive approach is now becoming accepted in IS/IT. The author continues to write that many authors have treated interpretive approach in different ways but none of them described how to carry out it (Walsham, 2006). But considering the main underlying philosophical assumption and theoretical concepts of interpretive evaluation approach (IEA), there have been published a considerable number of interpretive IS/IT research/evaluation articles that theorized these key concepts that will be discussed here in this chapter as fallows.

The evaluation paradigm shift, it is true that the choice of any believe system will influence the result of research or evaluation program argued Guba and Lincoln (1984). In other words, based on the evaluation paradigm we choose to adapt, the result or the findings of the evaluation program will be different. This means that any IS/IT evaluation findings may differ between evaluators/researchers. But this claim is refused by the proponents of the financial IS/IT evaluation approaches who argue that the evaluator must be remained neutral during the whole evaluation process. This claim is drawn on the positivist paradigm which in contrast to the Interpretivism distinguishes between the evaluator and evaluand or knower/subject and known/object.

As a necessity to shift towards a naturalistic inquiry or evaluation Guba and Lincoln proposed to call the new generation evaluation 'Fourth Generation Evaluation', which is based on 'Constructivist paradigm'. It was argued that financial evaluation approaches and their associated methodologies failed to consider evaluation of IS/IT investments as a complex multifaceted socio-organizational task (e.g., Symons, 1991; Serafeimidis and Smithson, 1999). In contrast to financial IS/IT evaluation approaches and their associated methodologies, it is

widely recognized that IEA besides addressing tangible business benefits/outcomes is capable to capture the intangible or social outcomes of IS/IT deployments (ibid). Interpretive approach aims to find new interpretations or deconstruct constructions created by a diverse group of stakeholders who are encouraged to enter the IS/IT evaluation process. In other words, the aim of interpretive evaluation approach (IEA) is to find new underlying meanings and it adheres to the ontological assumption of multiples realities, which are time-and context dependent (e.g., Klein and Hirschheim, 1989; Walsham, 1995). Considering the complexity and multifaceted roles of IS/IT investments viewed from many socio-organizational perspectives, interpretive IS/IT evaluation authors argue that evaluation is value-laden or value-related which leads to subjective findings (e.g., Guba and Lincoln, 1989; Jones and Hughes, 2001).

However, the philosophical basis of this new evaluation paradigm or 'world's view' is interpretative or hermeneutic by its nature (Guba and Lincoln, 1989; Walsham, 1993, 2006; Klein and Myers, 2004). This new world's believe system is viewed from four levels or philosophical perspectives known as: paradigm, ontological, epistemological and methodological. These four philosophical dimensions of hermeneutic/interpretive approach shown in Table 2 (see Section 3.2) can be further characterized or seen from other important aspects of IEA described below as:

- Multiple realities

Our world is comprised of multi realities. These realities are in constant change. Therefore every IS/IT evaluation is situational/historical or context-based (e.g., Jones and Hughes, 2001). But this is an illusion; because today's modern societies or organizations are complex and diverse representing many value-pluralistic realities on the ground which means IS/IT evaluation is information extensive/rich (Serafeimidis and Smithson, 1996). The value-pluralistic realities on the ground complicates indeed the process of IS/IT evaluation which implies that the evaluators are socially skilled in order to be able to evaluate effectively. As it will be discussed later in this chapter, different group of stakeholder create their own constructions and also deconstruct each other's constructions. This implies that evaluators are competent and trained to consider many complicated aspects of IS/IT evaluation. Within an organization where IS/IT investments are resided, there exists a variety of different understandings and interpretations of different things and events such as IS/IT investments and their evaluation processes. The role of IS/IT evaluators is to consider these created and at same time conflicting realities. The created constructions by different stakeholders must be negotiated in order to achieve maximum benefit from the evaluation.

Ontologically, the IS/IT evaluation must be produced and reinforced by stakeholders through their action and reaction. One important aspects of IEA are the notion of the theory of truth. Truth as intentional fulfillment means that interpretations of IS/IT investments match lived experienced of object (i.e., being-in-the-world). In other words, from an interpretative perspective there is no universally truth (Guba and Lincoln, 1989). Based on the researcher's own frame of reference, understanding and interpretation of the subject of study, in this case interpretation and understanding of IS/IT investments, is always subjective. The realism of context is very important along with emphasize on non-neutrality, meaning that; uncommitted neutrality is impossible or does not exist. This will effect both the process and the findings of IS/IT evaluation. According to Bezzi (2006), the evaluator's interpretations of the IS/IT investment (i.e., the evaluand) is derived from the structured meaning gained from his/her lived experience (i.e., being-in-the-world).

- Intersubjectivity

People make sense of their environments and thus interact with each other to reach different agreements based on common-sense. Knowing this, IEA emphasizes that shared cognition and consensus is essential in the shaping of people's ideas and relations.

- Subjectivity

All evaluations are value-laden"; evaluation is not free from judgments.

- Non-Generalizability

The outcome of any evaluation is time- and space-dependent. The IS/IT evaluation findings cannot and must not be generalized.

- Lifetime Learning

Learning is a continuous or interative process. Preunderstanding leads to new-understanding etc (see Chapter 4 for an extensive discussion on this).

- Validity

Validity of the evaluation result does not mean that the evaluation findings can be generalized. The investigator/evaluator's knowledge of the subject (i.e., the evaluand) is intentionally constituted through his/her lived experience.

- Reliability

The evaluator/evaluators of IS/IT investment/investments recognize and address implications of their subjectivities. The person (i.e., the evaluator of IS/IT investments) and the evaluand (i.e., the IS/IT investments or study program) are inseparable (life-world). In other words, the evaluator and the study program cannot be separated from each other which means that the evaluator will influence and be influenced by the IS/IT investments.

- Ethical considerations

Evaluation of IS/IT has its ethical and political consequences. Therefore, ethical and political considerations are seen as paramount in evaluation from its start to the end. Depending on which paradigm is used, different ethical and political issues may become relevant depending on the evaluator's position. As it is shown in Figure 7, the ethical considerations such as social- and political-influences along with political issues and corporate culture/structure belong to the internal dimension of an organization.

- Methodological level

There are many well-known interpretive evaluation approaches such as hermeneutics, phenomenology and formative etc. Using informal IT evaluation procedures (e.g. acts of faith and subjective statements) is very dependent upon the person evaluating the IS/IT investment and might very well result in a different conclusion if done by another person or at another time. IS/IT systems that initially aimed to produce a stream of outcomes, and whereas those that target to generate business values, require different outcomes and benefits modeling. When this is done, then the evaluation procedure will be more adequate and successful. Interpretive IS/IT articles view interpretive approach (IA) as an appropriate mechanism for evaluation of IST/IT systems. Therefore, the choice of using any IS/IT evaluation methodologies must be based on the underlying philosophical assumptions and theoretical concepts of interpretive approach.

6.2 ORGANIZATIONAL ISSUES AND ASPECTS OF IEA

Considering the intrinsic complexity and dynamic nature of organizations, it is believed that interpretive evaluation approach (IEA) can measure both business benefits and also social outcomes of IS/IT investments. This approach can also determine whether the conducted information systems deliver initially anticipated business benefits or not. IS/IT evaluation, in this case as an organizational process or a complex managerial issue, plays a multifaceted role and, as such, it is a vital organizational function, strongly related to other management and decision-making processes (e.g. Angell and Smithson, 1991; Baker, 1995; Hawgood and Land, 1988; Hirschheim and Smithson, 1987; Walsham, 1993; Ward and Daniel, 2006). Evaluation of IS/IT investments is widely considered to be complex and elusive, so that it is difficult to approach both conceptually and operationally (e.g. Blackler and Brown, 1988; Hirschheim and Smithson, 1988; Scott Morton, 1991; Symons, 1991; Willcocks, 1996; Zuboff, 1991). According to House (1993) evaluation has structurally become more integrated into organizational activities. Evaluation of IS/IT investments faces both conceptual and operational difficulties (e.g., Symons, 1991). Banker et al. (1993, p. 2) argue that:

> *Evaluating investments in information technology poses a number of problems that investing in the traditional assets does not present. The focus shifts from measuring hard and quantifiable dollar benefits that will appear on the firm's income statement to measuring indirect, diffuse, qualitative and contingent impacts that are difficult to quantify well.*

One of the elements in the interpretive IS/IT evaluation framework concerns the linkage between social context and social process as two important organizational issues. It is here that Interpretivism provides the key conceptual approach (Guba and Lincoln, 1984). Interpretivism addresses the link between stakeholders' actions. In other words, the actions of participants in the evaluation process inherits a social structure within which the IS/IT investments are situated. Stakeholders who work within the norms, rules and conventions of an organization are not behaving passively; rather they are reinforcing the organizational structures. There is therefore a hermeneutic circle of influence which was described in Chapter 3. Thus, in such a circle the participants are influenced by the organizational and also social structures and in turn, through their interactions, they influence the social structures, either reproducing them or changing them.

The organizational structures that belong to the internal environment shown in Figure 7 above have to be understood by the participants, which are mediated through interpretive schemes. Stakeholders produce a shared understanding of the organization through communication. There are also structures of domination such as social or political power which can both influence and be influenced by the evaluation process and findings. Moreover, how the evaluation is sponsored is an internal organizational issue which can impact the results of the evaluation, because the ability to allocate materials and resources is a political decision. These organizational aspects have a powerful role in making the IS/IT evaluator aware of possible political and cultural issues that should be considered in the evaluation of IS/IT investments.

Interpretive approach considers "Content", "Context" and "Process" of IS/IT evaluation. Evaluation should be seen as an interative rich leaning process that continues throughout the life-span. Evaluation is a complex and multi-faceted managerial issue which requires rich insight (e.g., Walsham, 1995). Effective evaluation requires that evaluators are equipped with many socio-organizational skills. Evaluation as a political, nonobjective process, different stakeholders

may have conflicting interests and exercise unequal power. Technology is not neutral but is socially constructed, presenting opportunities for furthering the case of emancipation or detracting from it. Different relevant social groups may have different interests. For the technology (or evaluation) to succeed these groups must be 'enrolled' in the process, i.e. their interests must be engaged. Evaluation must be normative (guided by norms and values), and represent interests of all groups affected by the technology. It should be based on learning and dialogue.

IS/IT is a mixture of social and technical, and thus evaluation should be a socio-technical process itself. The distinction between social and technical is largely preserved. Technology is socially constructed and evaluation is a part of this (contingent and complex) process. The social and technological are closely interwoven and cannot be artificially separated. Evaluation as an informal, subjective and situated process is understood in a particular context (e.g., organizational) and within a canvass of our past experiences, argued Jones and Hughes (2001). Understanding (and thus evaluation) is an incremental circular process involving re-interpretations. The outcomes of evaluation will undoubtedly impact any future decision regarding IS/IT investments. Considering the importance of different stakeholders or subgroups within the organization, these actors (i.e., stakeholders) will have shared meanings or perceptions about both IS/IT deployments and evaluation of these systems that are more subjective in nature than objective.

6.3 MULTIPLE STAKEHOLDERS

Evaluation as a profession, evaluation is a professional deep-insight activity which requires competent people with multiple social skills to do the task (Walsham, 1995). Interpretive approach recognizes stakeholders as key actors and their claims, concerns and issues are at the core of IEA (e.g., Guba and Lincoln, 1989; Symons, 1991). Interpretive approach encourages and honors all diverse groups of stakeholders to be actively involved in the evaluation process from the first stage to the end. The result of current evaluation will impact both the process and the outcome of any evaluation in the future. IEA emphasizes that the selective involvement of some stakeholders and denying participation of others, affect the findings and empowering or disempowering stakeholders.

Encouragement and active participation, stakeholders must be encouraged and honored to enter in the evaluation process, argued Guba and Lincoln (1989). If stakeholders are not involved in the evaluation, it, firstly, raises the question of legitimation, and secondly, damages the issue of multi sets of values that reside in situation. If there would be a course of action, then the most stakeholders must agree and it's done through negotiation. Honoring the distinctive set of values, stakeholders will find a reason to participate or find a person to support in evaluation (Avgerou, 1995). Moreover, how e.g., the evaluation is interpreted by stakeholders or an organization is a big issue to be considered. As a critic to IEA, here it can be said that due to the stakeholder-oriented aspect of IEA, the evaluation process will be time-consuming.

Evaluation as a political process, different interested parties should have a chance to voice their opinions about the system and its potential effect. An 'optimal' solution can be arrived at (designed) through a rational process of negotiations. The created constructions of different group of stakeholders must be negotiated to reach consensus about the IS/IT investments and their impacts. Different concerns, claims and issues of stakeholders must be taken into account.

Different stakeholders' constructions must be negotiated. If there would be a course of action, then the most stakeholders must agree and it's done through negotiation. Honoring the distinctive set of values, stakeholders will find a reason to participate or find a person to support in evaluation.

According to Guba and Lincoln, the interpretive approach considers the *concerns*, *claims* and *issues* of stakeholders. The stakeholders as groups at risk are characterized by; firstly, their rights to articulate various claims, concerns, values and judgments, secondly, their openness to exploitation, disempowerment and disfranchisement, and thirdly, stakeholders are users of evaluation information, argued Guba and Lincoln (1989). Considering the crucial role of different stakeholders, I suggest four success factors shown below in Table 7 to empower participation of multiple stakeholders in the evaluation process of IS/IT investments.

The focus of interpretive evaluation approach (IEA) is to capture all stakeholders' distinguished opinions, encouraging and getting them to inter and be involved in the whole process of IS/IT evaluation. The involvement of all stakeholders in the IS/IT evaluation process depends on how well the IS/IT is integrated in the organization. The interpretive approach aims to address the user satisfaction which is recognized to be in focus and the evaluation of IS/IT investments depends more on how these investments are perceived by different actors within the firm. All stakeholders are sponsors of the IS/IT investment encouraged to be involved by continuously and actively participations and thus their feedbacks or distributions to the system help to conduct effectively IEA. Value adding to the system starts right here once the users reach a sense of common awareness, get used of the information systems and are able to share same culture or language which as essential components during the whole evaluation process.

The issue of evaluators, evaluation as a profession is a managerial issue. Meaning, any effective evaluation requires that evaluators are well-equipped, competent and must have many social skills and experiences. This is due to the issue of complex and multifaceted nature of stakeholders who create their own and sophisticated constructions (e.g., Guba and Lincoln, 1989; Walsham, 1995). Evaluators must be able to deconstruct the various created, and sometimes, constructions by stakeholders. How evaluators enter in the process of evaluation and thereafter plan to manage this complex task and also how they influence and will be influenced by the course of the evaluation process is discussed thoroughly by many authors (e.g., Walsham, 1999, 2006; Guba and Lincoln, 1989; Cronholm and Goldkuhl, 2003).

Cronholm and Goldkuhl (2003) wrote about different strategies for evaluation of IS/IT investments. Thus, these authors developed six generic IS/IT evaluation types linked to the various roles of evaluators when evaluating IS/IT investments seen as either "IS/IT in use" or "IS/IT as such" (see Chapter 5). Walsham (1995) describes evaluators as either '*Involved Researcher*' or '*Outside Researcher*'. The different roles played by these two types of evaluators are discussed thoroughly in chapter 5.

TABLE 7: FOUR SUCCESS FACTORS FOR EMPOWERING THE PARTICIPATION OF MULTIPLE STAKEHOLDERS IN THE EVALUATION SUCCESS

Condition	Description
Commitment	Different group of stakeholders will commit for genuine and active participation in the evaluation process which will explore their concerns, claims and issues and aim at reaching consensus, and willingness to devote necessary time and effort during the whole evaluation process.
Competence	To capture both tangible and intangible business benefits and outcomes, a certain degree of all involved parties is required to enable communications and thus to facilitate negotiate concerns and claims.
Political willingness	It refers to the willingness of all involved evaluation actors to share power.
Willingness to change	All parties must be willing to reconsider their value positions and to commit themselves to changes decided by the evaluation process.

6.4 THE CONTEXTUAL EVALUATION FRAMEWORK OF IEA

Derived from the interpretive IS/IT evaluation literature that was explored previously in this paper, it can be concluded that beside consensus about those main salient philosophical concepts the well-known and widely used interpretive contextual evaluation framework called CCP (i.e., Content, Context and Process) can be linked to a set of evaluation activities shown in Table 8 below. Moreover, as it is shown in Table 8, there is a fourth concept termed as 'history'. In relation to the interpretive contextual IS/IT framework and in order to further develop this contextual evaluation framework (CCP), there are many important questions to be asked here that will be set out later in this section. However, content, context, process and history as four main theoretical concepts of interpretive evaluation approach (IEA) for evaluation of IS/IT investments that will be briefly discussed here as follows:

- Content

As was described by Serafeimidis and Smithson (1994, 1996), the content refers to the values and criteria to be considered and "WHAT" should be measured for WHOM and WHY. The problem to be addressed here is the nature of IS/IT investments and processes the organization is involved in. In analysing the content, the problem requiring an IS/IT solution must be understood. The products, processes and IS/IT investments of the organization must be investigated. Also the nature of the proposed IS/IT be analysed thoroughly. An understanding of the social context into which the IS/IT will be placed is crucial to conduct effectively IEA. This with the process of IS/IT evaluation which will take place and the time it requires are two other important aspects of the content of IS/IT evaluation. These aspects comprise a static view of the organization of the IS/IT evaluation. Moreover, the social process by which the information

system will influence the organization must be examined in order to empower the IS/IT evaluation process.

- Context

Due to the uniqueness of every organization, each organization needs to take into account its peculiar context in order to facilitate the process of evaluation. The concept of context refers to identification of a set of various both internal and external organizational factors such as socio-political, economic or competitive environments that will impact the organization of IS/IT evaluation. The context should address why- and for whom-questions of IS/IT evaluation (Stockdale and Standing, 2006). As an example, the role of stakeholders is an inner-organizational issue which can influence and be influenced by the evaluation process and its outcomes (Remenyi and Sherwood-Smith, 1999; Serafeimidis and Smithson, 1996, 1998, 1999, Smithson and Hirschheim, 1998; Walsham, 1993, Symons, 1991; Jones and Hughes, 2001). Another question that can be asked here is the 'PURPOSE' of evaluation. The purpose of evaluation can reshape the organization's political structure, argued Serafeimidis and Smithson (1996).

- Process

The evaluation process according to Willcocks (1992) is a mechanism by which the value of IS/IT to the organization can be measured in order to bring into play the notions of risk and benefits. The IS/IT evaluation process needs to consider both the internal and external organizational environments (Symons, 1991). One important criterion before the start of the evaluation process is to think about the purpose of the IS/IT evaluation. The IS/IT evaluation should provide useful information to managers as a support for strategic decision making and better overview of the IS/IT investments. The threat is that the evaluation becomes too difficult or too time demanding, particularly when conducting IEA. But, the evaluation shouldn't become greater than the evaluated project itself. Therefore equilibrium between the information provided by the evaluation and the resources needed for undertaking it should be found.

In the evaluation process, after considering the concerns, claims and issues of different stakeholders, one of the evaluator's biggest challenging task is to seek understand the perceptions of the actors who are to be involved in the IS/IT evaluation process. Cronholm and Goldkuhl (2003) wrote about different IS/IT evaluation strategies or the HOW of evaluation described as goal-based, goal-free and criteria-based. Considering the purposefulness of every evaluation, the goal free evaluation process mentioned here is not what the IEA would recommend. However, the process of evaluation is a mechanism by which the IS/IT investments will be evaluated. Due to the hermeneutic nature of interpretive approach, the evaluation process of IS/IT investments is an interative learning process. The Evaluation funding will impact the evaluation results and the evaluator's future work. The key question to ask here is, who sponsors the evaluation and why?

However, the questions that will be raised here are about the concept of 'evaluation process' and their primary focus on society/organization, group/organization and individuals as fallows. What is the macro context of the evaluation? In what way macro trends (and their perceptions by different actors) influence the evaluation? Who sponsors the evaluation? What are its underlying aims? Are the interests of different groups represented in the evaluation, and how? What are the power relations between different groups? How do the process of evaluation and the choice of

measurements affect the evaluation outcome? Who are the stakeholders? What are the goals and measures relevant to the business, employee and customer/users perspectives? Does the system help to achieve those goals? Are working lives reflected in the designing of technology? What are the relevant social groups? What are their views about the system? How are they enrolled in the process of stabilizing (and evaluating) IS/IT deployments? What organizational vision does the IS support/appear to support/or suppose to support in the eyes of different groups? In what organizational context is the evaluation being conducted? How is the IS/IT constructed through evaluation? What are people's daily experiences of the system? Is the IS embedded in their work practices? How do they perceive the system? How are such perceptions constructed? (E.g. What theories-in-use influence their perceptions; what are their past experiences of similar IS/IT?).

- History

Knowing the situatedness or conceptual uniqueness of any IS/IT evaluation, interpretive approach advocates every new evaluation will learn from the past evaluation experiences (e.g., Guba and Lincoln, 1984; Jones and Hughes, 2001). This is because of the circularity nature of the hermeneutic circle described previously in Chapter 3 of this paper. But the concept of history does not mean that the IS/IT evaluation findings could yield in other IS/IT evaluation situations or can be generalized. This is due to the fact that the proponents of interpretive approaches refuse the generalizability of any IS/IT findings. A historical understanding of content, context and process as three interrelated conceptual elements of the interpretive IS/IT evaluation framework is necessary because IS/IT changes and their evaluation (including learning from failures) evolve over time and, at any particular point, present a series of constraints and opportunities shaped by previous history (Serafeimidis and Smithson, 1996). Two conceptions of history; one as a narrative succession of significant events and the other as a proximate (immediate) history of social phenomena and the effects of their long-term history on organizational practices have been discussed by many interpretive IS/IT evaluation authors such as Serafeimidis and Smithson (1996).

TABLE 8: LINKING CONTENT, CONTEXT, PROCESS AND HISTORY TO SOME SUGGESTED EVALUATION ACTIVITIES (BABAHEIDARI, S.M, 2007

Theoretical Concepts	Evaluating activities
Content	What is the purpose of evaluation? What to evaluate? Value tracking, identification of value IS/IT strategy links to organization's strategy
Context	Identifying different group of Stakeholders Intern and extern organizational environments Competing and linked projects The context provides the "surround", within which the evaluators live and shaping constructions and try to make sense All understanding takes place in context, sorting out resolved claims, concerns and issues What to be evaluated? For whom?
Process	HOW to evaluate? Involving managers and professional Evaluation method and techniques Developing a learning mechanism Strategic alignments, IS/IT and other business alignments Organizing
History	Prior experience in evaluation Familiarity with the use of different financial and non-financial evaluation methodologies and techniques The evaluation history or results is always situational which means the findings cannot be generalized

6.5 SOME IEA ISSUES AND CHALLENGES

Despite many interpretive IS/IT evaluation/research articles, none of the interpretive IS/IT researchers show how to carry out IEA (Walsham, 2006). Knowing this, I suggest a set of three interrelated aspects of IEA aimed to enrich the understanding of the interpretive contextual framework (CCP) shown in Figure 8 below. These three sets of aspects can be linked to the success or failure of conducting interpretive evaluation approach (IEA) described very briefly as:

- *People aspects*

For example the concern, claim and different issues of a divers group of stakeholders and the roles of different evaluators must be taken under great considerations during the entire process of IS/IT evaluation. Different group of stakeholders are indeed at the heart of the interpretive evaluation approach. Interpretive approach encourages stakeholders to enter in evaluation

process actively and their contributions will be honored. The people aspects will indeed address the *WHO* of evaluation. The success or failure of an information system and the delivery of tangible business benefits and intangible social outcomes are dependent on the people who are using it. I argue interpretive evaluation approach (IEA) is a successful evaluation approach which will seek to understand the users' perception of the proposed IS/IT investment.

- *Socio-organizational aspects*

Patton (1986) argues the program evaluation is utilized to reduce uncertainties, inform decisions, clarify options, and provides and facilitates information about programs and policies that function within the limited contextual zone of time, place, values, and politics. Patton continues to write, while research is aimed at truth, evaluation is focusing on and addressing action. The critical assumptions of interpretive evaluation approaches reviewed previously in this paper can be further understood by analyzing important factors such as associating the degree of clarity of IS/IT objectives and clarity regarding their potential impact on both organization and the subgroups of stakeholders. Organizational aspects of interpretive IS/IT evaluation approach are grouped into external and internal environments that together impact the process of IS/IT evaluation (see Figure 7). For example, the impact on the organization of the anticipated IS/IT investment can be perceived differently at different organizational levels, operational or strategic (e.g., Ward and Daniel, 2004; Serafeimidis and Smithson, 1996).

Socio-organizational aspects of IS/IT investments are crucial in order to evaluate effectively. This issue faces many conceptual and operational difficulties. As an example, one difficulty is the organizational culture which will be briefly described here as; the analytical framework, emergent and specific, opportunities for creation of meaning. These are unique to each cultural context (e.g., in evaluation of IS/IT investments); analytical processes, divergent, it expands and enriches life cycle evaluation of IS/IT investments and maintenance of IS/IT deployments; culture as pattern, a worldview or webs of significance must be taken under great considerations because IEA emphasize on the importance of IS/IT evaluation as a historical and interative learning process. It was argued that the IS/IT evaluation funding will influence the evaluator. Culture as essence, interpreting the symbolic expressions and representations of deep layers of meaning that are constructed by different stakeholders enrich the evaluation. One important role of evaluator whatever of types that were discussed above is considering culture as both static and dynamic. Culture as static, interrelated, it refers to circular relations between interpretations and meaning which means seeking "Understanding".

- *The future development of CCP*

Based on interpretive approach, there is a lack of developing rigorous interpretive methodologies and utilization techniques. Due to the plethora of available IS/IT evaluation methodologies found in IS/IT-centric evaluation literature, it has been claimed that interpretive approach can use and combine both financial and non-financial evaluation methodologies. The only requirement is to capture or incorporate socio-organizational issues in the methodology.

Three Group of Interrelated Factors Determining Success or Failure of Conducting Interpretive Evaluation Approach (IEA)

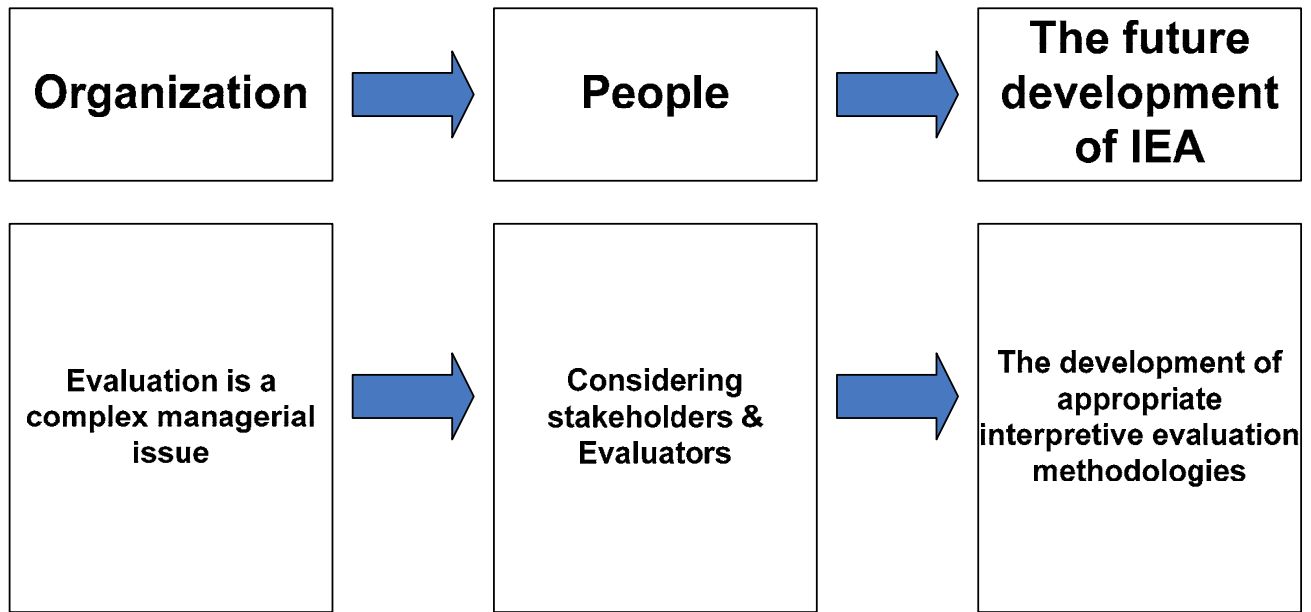|		
Organization	**People**	**The future development of IEA**
Evaluation is a complex managerial issue	Considering stakeholders & Evaluators	The development of appropriate interpretive evaluation methodologies

FIGURE 8: THREE GROUP OF INTERRELATED FACTORS DETERMINING SUCCESS OR FAILURE OF CONDUCTING INTERPRETATIVE EVALUATION APPROACH (BABAHEIDARI, S.M, 2007)

CHAPTER 7: CONCLUSION

As it was explained earlier in this paper (see Chapters 1 & 2), the main objective of this master's thesis was to study the following two research questions:

- What are the key concepts of interpretive evaluation approach (IEA)?

- How are these concepts described?

After studying above mentioned two research questions, this thesis can conclude that our world is comprised of multi realities. These realities are in constant change. Therefore every IS/IT evaluation is situational/historical or context-based. The value-pluralistic realities on the ground complicates indeed the process of IS/IT evaluation which implies that the evaluators are socially skilled in order to be able to conduct effectively interpretive evaluation approach (IEA). But this is an illusion; because today's modern societies or organizations are complex and diverse representing many value-pluralistic realities on the ground which means the process of IS/IT evaluation is a deep-insight activity and information extensive/rich.

   The result of this IS/IT literature review concludes that while the financial approaches and their associated methodologies can measure financial or tangible business benefits/values of IS/IT investments, they fail to address and measure the intangible or social outcomes/benefits of these investments. As IS/IT become embedded in organizations, these systems cannot be isolated from human intellect, culture, philosophy and socio-organizational changes. This paper examined that the calls for interpretive evaluation approach (IEA) that incorporates the recognition of information systems/technologies (IS/IT) as socio-technological entities have increased since the end of 1980s. This thesis concludes that interpretive approach has become a hot issue in IS/IT evaluation field and a significant progress have been achieved in the past few years. Expectations go beyond various research visions, towards utilization of this approach for effectively evaluation of IS/IT investments.

   IEA emphasizes IS/IT evaluation should be seen as an interative rich leaning process which continues throughout the life-span. Evaluation is a complex and multi-faceted managerial issue which requires rich insight. Effective IS/IT evaluation requires that evaluators are equipped with many socio-organizational skills. It can be concluded that different stakeholders may have conflicting interests and exercise unequal power within an organization. Therefore, evaluation is a political, nonobjective process. Technology is not neutral but is socially constructed, presenting opportunities for furthering the case of emancipation or detracting from it. Thus, for the IS/IT evaluation to succeed all stakeholders must be 'enrolled' in the process, i.e. their interests must be engaged. Evaluation must be normative (guided by norms and values), and represent interests of all groups affected by the IS/IT investments. The evaluation should be based on learning and dialogue. It can be concluded that the realities created by a diverse group of stakeholders, or their understandings and interpretations of the IS/IT evaluation must be negotiated aimed at conducting effectively IEA.

   Evaluation is always a political process with differing interests, priorities and consequences. Therefore IS/IT evaluation is seen as a complex multi-faceted socio-technological task inheriting both conceptual and operational difficulties. This paper investigated that there are widely consensus about the key concepts and particularly the main underlying philosophical assumptions and theoretical concepts of IEA. Some of these main focal philosophical

assumptions and theoretical concepts explored previously in this paper will be briefly described as:

- Multi-realities

Our world is comprised of multi realities and these realties are in constant change.

- Intersubjectivity

It emphasizes that shared cognition and consensus is essential in the shaping of both stakeholders and evaluators' various ideas and relations.

- Constructions and deconstructions

Different group of stakeholder create their own constructions and also deconstruct each other's constructions. The role of evaluators is to consider these created constructions.

- Consequences

The outcomes of evaluation will impact any future managerial decision and the people involved in the process such as stakeholders as groups at risk.

- Tangible/intangible business benefits and social outcomes

Interpretive approach differentiates between business benefits that are easy to measure by use of financial metrics and social outcomes that are hard to quantify. But it claims to capture both.

- Two types of evaluators

Evaluators/researchers are either "*Outside evaluator*" or "*Involved evaluator*". Each of these two types of evaluators encounters a variety of different issues and s set of tangible and intangible difficulties respectively.

- Lifecycle evaluation

Evaluation is an iterative learning process.

- The interpretive IS/IT contextual evaluation framework

Many interpretive IS/IT evaluation authors have deployed a contextual evaluation framework termed CCP (i.e., *Content*, *Context* and *Process*). This framework seeks to answer three focal interrelated questions that are briefly described below:

- o *WHAT*, it is concerned with the identification of the content of evaluation by focusing on "*WHAT*" should be evaluated or incorporated into the evaluation process. The *WHAT* of evaluation is also linked to the subject of IS/IT evaluation.
- o WHY, it is concerned with for "*WHOM*" the evaluation might be conducted and it is also linked to the logical rationale behind the "*JUSTIFICATION*" of evaluation of IS/IT investments. Moreover, the why-question will address the purpose/reasons of IS/IT evaluation.
- o HOW, this is dealing with the specific mechanism or a set of procedures/questions aimed to empower the evaluation process and also employing appropriate and rigorous interpretive IS/IT evaluation methodologies and tools to be used.

Future Research

This thesis concludes that despite consensus about main underlying philosophical assumptions and theoretical/Metatheoretical concepts of interpretive evaluation approach (IEA), particularly the widely used interpretive contextual IS/IT evaluation framework known as "CCP", there is no clear guidance how to carry out interpretive approach for evaluation of IS/IT investments. Thus, as a contribution to the interpretive IS/IT evaluation discourse, I propose an analysis of how various appropriate financial and non-financial evaluation methodologies can be mixed to facilitate effectively the utilization of IEA.

Drawn on the philosophical basis of interpretive evaluation approach (IEA), a mixture of financial and non-financial IS/IT evaluation methodologies can better capture both tangible business benefits and intangible social outcomes of IS/IT investments. For further research, I propose additionally the deployment of longitudinal, interpretive, in-depth IS/IT case studies, with the purpose to enrich the theory and practice of exploratory IS/IT evaluation, Such research should focus on the socio-organizational aspects of IS/IT evaluation, especially the consideration of all involved stakeholders in the evaluation process. The question as to how to establish skilled team of evaluators to conduct such evaluation cases, what kind of rigorous interpretive IS/IT evaluation models or methodologies are appropriate to study and evaluate the dynamics of IS/IT investments, and how to operationalize an interpretive research paradigm in practical terms to utilize empirical IS/IT evaluation research are all areas for further exploration.

REFERENCES

Abu-Samaha, Ala and Mansi, Ibrahim (2004), "The Use of 'Gap Analysis' Charts to Judge IS Implementation Success/Failure", 11th European Conference on Information Technology Evaluation (ECITE), pp. 14-21. Royal Netherlands Academy of Arts and Sciences, Amsterdam 11-12.

Avgerou, Chrisanthi (1995), "Evaluating Information Systems by Consultation and Negotiation", International Journal of Information Management, Vol. 15, No. 6, pp. 427-436.

Avgerou, Chrisanthi. (2001), "The Significance of Context in Information Systems and Organizational change", Information Systems Journal, Vol. 11, pp. 43–63.

Avison, David and Pries-Heje, Jan (2005), "Research in Information Systems: A Handbook for Research Supervisors and their Students", Information Systems Series, Elsevier Butterworth-Heinemann, ISBN 0750666552.

Ballentine, Joan A. and Stray, Stephanie (1999), "Information Systems and other Capital Investments: Evaluation Practices Compared", Logistics Information Management, Vol. 12, No. ½, pp. 78-93.

Ballentine, J., Levy, M., Powell, P. (1998), "Evaluating Information Systems in Small and Medium-Sized Enterprise: Issues and Evidence", European Journal of Information Systems, Vol. 7, No. 4, pp. 241-251.

Bannister, Frank, Berghout, Egon, Griffiths, Paul and Remenyi, Dan (2004), "Tracing the Eclectic (or maybe even Chaotic) Nature of ICT Evaluation", 11th European Conference on Information Technology Evaluation (ECITE), pp. 41-51. Royal Netherlands Academy of Arts and Sciences, Amsterdam11-12 November.

Bannister, Frank and Remenyi, Dan (2003), "Evaluating the Information Society: Some Conceptual Issues", 10th European Conference on Information Technology Evaluation, 25-26 September, Spain.

Bannister, Frank (2003), "Value Perception in IT investment Decisions", Electronic Journal of Information Systems Evaluation, Vol. 2, No. 2.

Barney G. Glaser and Anselm L. Strauss (1987), "The discovery of grounded theory: Strategies for qualitative research", ISBN 0-202-30028-5 cloth & 0202-30260-1 paper.

Barrow, Patrick D.M. & Mayhew, Pam J. (2000), "Investigating principles of stakeholder evaluation in a modern IS development approach", The Journal of Systems and Software, Vol. 52, No., 2-3, pp. 95-103.

Benbasat, Izak, Goldstein, David K. & Mead, Melissa (2002), "The Case Research Strategy in Studies of Information Systems", I M. D. Myers & D. Avison (Ed.), Qualitative Research in Information Systems.

Benbasat, I. and Zmud, R. W. (2003), "The Identity Crisis within the IS discipline: Defining and Communicating the Discipline's Core Perspectives", MIS Quarterly, Vol. 27, No. 2, pp. 183-194.

Berghout, Egon and Remenyi, Dan (2005), "The Eleven Years of the European Conference on IT Evaluation: Retrospectives and Perspectives for Possible Future Research", Electronic Journal of Information Systems Evaluation, Vol. 8, No. 2, P. 81-98.

Bezzi, Claudio (2006), "Evaluation Pragmatics", SAGE Publication, London, Vol., 12, Nov. 1, pp. 56-76.

Boland, R. J. (1991), "Information System use as a Hermeneutic Process, in Nissen, H.-E., Klein, H.K. and Hirschheim, R. A. (Eds), Information Systems Research: Contemporary Approaches and Emergent Traditions, North Holland, Amsterdam, pp. 439-464"

Charmaz, Kathy (2006), "Constructing Grounded Theory: A Practical Guide through Qualitative Analysis", SAGE Publications.

Cronholm, Stefan, Ågerfalk, Per J. (1999),"On the Concept of Method in Information Systems Development", Proceedings of the 22nd Information Systems Research Seminar in Scandinavia (IRIS 22), Vol. 1, PP. 229-235, Finland.

Cronholm, S. and Goldkuhl, G. (2003), "Strategies for Information Systems Evaluation: Six generic types", Electronic Journal of Information Systems Evaluation, Vol. 6, No.2, pp. 65-74.

Cronk, Marguerite C., Fitzgerald, Edmond, P. (1999), "Understanding 'IS Business Value': Derivation of Dimensions", Logistics Information Management, Vol. 12, No. 1-2, pp. 40-49.

Delius, Harald (1953), "Descriptive Interpretation", Philosophy and Phenomenological Research, Vol. 13, No. 3, pp. 305-323.

Dourish, Paul (2004), Where the Action Is: The Foundation of Embodied Interaction, Cambridge, Mass., MIT Press.

Eriksson, L.T. & Widersheim-Paul, F. (1999), "Att Utreda Forska och Rapportera", Malmö: Liber Ekonomi.

Erlandson, David, A., Harris, Edward, L., Skipper, Barbara, L. (1993), Doing Naturalistic Inquiry: A Guide to Methods, SAGE Publications, 1993, USA, ISBN 0-8039-4937-5.

Fitzgerald B. and Howcroft D. (1998), "Competing Dichotomies in IS Research and Possible Strategies for Resolution", In Proceedings of the international Conference on information Systems (Helsinki, Finland). International Conference on Information Systems, Association for Information Systems, Atlanta, GA, pp. 155-164.

Freeman, R.E. (1984), "Strategic Management: A Stakeholder Approach", Boston: Harper Collins.

Frisk, Elisabeth (2006), "Obstacles on the Road to Achieving Value of IS/IT: A Case Study", Proceedings of the 13th European Conference on Information Technology Systems, 28-29 September, pp. 222-229.

Fossey, Ellie, Harvey, Carol, McDermott, Fiona, Davidson, Larry (2002), "Understanding and Evaluating Qualitative Research", Australian and New Zealand Journal of Psychiatry, Vol. 36, No. 7, pp. 17–732.

Gioia, Dennis A. and Pitre, Evelyn (1990), "Multiparadigm Perspectives on Theory Building", The Academy of Management Review, Vol. 15, No. 4, pp. 584-602.

Glaser, Barney G., Strauss, Anselm L. (1967), The discovery of grounded theory: Strategies for qualitative research, New York, ISBN 0-202-30028-5 cloth & 0202-30260-1 paper.

Goles, Tim and Hirschheim, Rudy (1999), "The Paradigm Is Dead, the Paradigm Is Dead. . .Long Live the Paradigm: the Legacy of Burrell and Morgan", Omega, Vol. 28, pp. 249-268.

Guba, Egon G., Lincoln, Yvonna S. (1989), Fourth Generation Evaluation, SAGE Publications, Newbury Park, London, New Delhi, pp. 51-83-84.

Gupta, Amit (1995, p.), "A stakeholder Analysis Approach for Interorganizational Systems", Industrial Management & Data Systems, Vol. 95, No. 6, pp. 3-7.

Hirschheim, Rudy and Klein, Heinz K. (1989), "Four paradigms of Information Systems Development", Communications of ACM, Vol. 39, No.10, pp. 1199-1216.

Irani, Z. and Love, P.E.D. (2001) "Information Systems Evaluation: Past, Present and Future", European Journal of Information Systems, Vol. 10, pp. 183–188.

Irani, Zahir. (2002), "Information Systems Evaluation: Navigating through the Problem Domain", Information and Management, Vol. 40, No. 1, pp. 12–24.

Jawahar I. M. and McLaughlin Gary L. (2001), "Toward a Descriptive Stakeholder Theory: An Organizational Life Cycle Approach", The Academy of Management Review, Vol. 26, No. 3, pp. 397-414.

Jones, S., and Hughes, J., (2001), "Understanding IS Evaluation as a Complex Social Process: A Case Study of a UK Local Authority", European Journal of Information Systems, Vol. 10, pp. 189-203.

Jones, Steve & Hughes, Jim (2001), "An Exploration of the Use of Grounded Theory as a Research Approach in the Field of IS Evaluation", The European Conference on Information Technology Evaluation (ECITE-2001).

Kefi, Hajer (2002), "IS/IT Evaluation: A Context-Based and Process-Oriented Perspective", Ninth European Conference on Information Technology Evaluation, Edited by Ann Brown and Dan Remenyi, Université Paris-Dauphine, France, pp. 249-257.

Klecun, Ela and Cornford, Tony (2005), "A Critical Approach to Evaluation", European Journal of Information Systems, Vol. 14, pp. 229–243.

Klein, Heinz K., Myers, Michael D. (1999), "A Set of Principles for Conducting and Evaluating Interpretative Field Studies in Information Systems", MIS Quarterly, Vol. 23, No. 1, pp. 67-94.

Klein, Heinz K and Hirschheim, Rudy (1989), "Four Paradigms of Information Systems Development", Communications of the ACM, Vol. 32, No. 10, pp. 1199-1216.

Klein, Heinz K and Myers, Michael D (1999), "A Set of Principles for Constructing and Evaluating Interpretative Field Studies in Information Systems", MIS Quarterly Vol. 23, No. 1, pp. 67-94.

Kelliher, F. (2005), "Interpretivism and the Pursuit of Research Legitimization: An Integrated Approach to Single Case Design", The Electronic Journal of Business Research Methodology, Vol. 3, No. 2, pp. 123-132, available online at www.ejbrm.com

Kuhn, Thomas S. (1996), The Structure of scientific Revolutions, The University of Chicago Press, third edition. ISBN: 0-226-45807-5 (cloth).

Lagsten, Jenny and Karsson, Fredrik (2006),"Multiparadigm Analysis-Clarity of Information Systems Evaluation", Proceedings of the 13th European Conference on Information Technology Systems, 28-29 September, pp. 333-341.

Lee, Allen S. (2002). A Scientific Methodology for MIS Case Studies. I M. D. Myers and D. Avison (Ed.) Qualitative Research in Information Systems. London, SAGE.

Lin, Chad and Pervan, Graham P. (2001), A Review of IS/IT Investment Evaluation and Benefits Management Issues, Problems, and Process, Wim Van Grembergen, Wim (Editor), Information Technology Evaluation Methods & Management, Hershey, PA, USA: Idea Group Publishing.

Lincoln, Yvonna S., Guba, Egon G. (1985), Naturalistic Inquiry, SAGE Publications, Newbury Park, London, New Delhi.

Love, Peter E.D., Ghoneim, Ahmed and Irani Zahir (2004), "Information Technology Evaluation: Classifying Indirect Costs Using the Structured Case Method", The Journal of Enterprise Information Management, Vol. 17, No. 4, 2004, p. 312-325.

Markus, M. Lynne and Robey, Daniel (1998), "Information Technology and Organizational Change: Casual Structure in Theory and Research", Management Science, Vol. 34, No. 5, pp. 583-598.

Martinsons, Maris, Davison, Robert and Tse, Dennis (1999), "The Balanced Scorecard: A Foundation for the Strategic of Information Systems", Decision Support Systems, Vol. 25, pp. 71-88.

McKeown, P.G., Watson, R.T. (1999), "Manheim Auctions", Communications of AIS Vol. 1, No. 20.

Miller, Eugene F. (1972), "Positivism, Historicism, and Political Inquiry", The American Political Science Review, Vol. 66, No. 3, PP. 796-817.

Mirani, R. and Lederer, A.L. (1998), "An Instrument for Assessing the Organizational Benefits of IS Projects", Decision Sciences, Vol. 29, No. 4, pp. 803–838.

Miskelly, Clodagh, Moggridge, Anne, Stephenson, Clare and Williams Morris (2004), "Formative and Interpretive Approaches to the Evaluation of Community Focused Web Fronted Projects", 11th European Conference on Information Technology Evaluation (ECITE), pp. 281-288, Royal Netherlands Academy of Arts and Sciences, Amsterdam11-12 November.

Ngwenyama, Ojelanki K. (2002). The Critical Social Theory Approach to Information Systems: Problems and Challenges, I M. D. Myers & D. Avison (Ed.) Qualitative Research in Information Systems. London, SAGE.

Onweugbuzie, Anthony J. (2002), "Why Can't We All Get Along? Towards a Framework for Unifying Research Paradigms", Education, Vol. 122, No. 3, pp. 518-531.

Orlikowski, Wanda J. (1992), "The Duality of Technology: "Rethinking the Concepts of Technology in Organizations", Organization Science, Vol. 3, No. 3, Focused Issue: Management of Technology, pp. 398-427.

Orlikowski, Wanda J. & Baroudi, Jack J. (2002). Studying information technology in organizations: Research approaches and assumptions. I M. D. Myers & D. Avison (Ed.) Qualitative Research in Information Systems. London, SAGE.

Palmer, Richard E. (1969), Hermeneutics: Interpretation Theory in Schleiermacher, Dilthey, Heidegger, and Gadamer, Northwestern University Press, ISBN: 0-8101-0027-4.

Parker, Marilyn M., Benson, Robert J., Trainor, H. E., (1988), "Information economics: Linking Business Performance to Information Technology", London: Prentice-Hall.

Patton M., Q., (1986), Utilization- Focused Evaluation, SAGE Publications, ISBN 0-8039-2779-7.

Pettigrew, Andrew M. (1990), "Longitudinal Field Research on Change: Theory and Practice", Organization Science, Vol. 1. No.3, pp. 267-292.

Powell, P., (1992), "Information Technology Evaluation: Is It Different?" The Journal of the Operational Research Society, 1992, Vol. 43, No. 1, pp. 85-89.

Rebien, C. C. (1996), "Participatory Evaluation of Development Assistance", Evaluation Vol. 2, No. 2. pp 151-171, Sage Publications, London.

Renkema, T.J.W. and Berghout, E.W (1999), "Methodologies for Information Systems Evaluation at the Proposal Stage: A Comparative Review", Information and Software Technology, Vo. 39, pp. 1-13.

Remenyi, Dan, Sherwood-Smith, Michael, White, Terry (1997), "Achieving Maximum Value from Information Systems: A Process Approach", John Wiley & Sons, England.

Remenyi, Dan, Sherwood-Smith, Michael (1999), "Maximize Information Systems Value", Logistics Information Management, Vol. 12, No. 1-2, pp. 14-31.

Remenyi, Dan (2003), "The Elusive Nature of Delivering Benefits from IT Investment", Electronic Journal of Information Systems Evaluation, 2003, Vol. 1, No. 1, pp. 1-18.

Seddon, P. Staples, S. Patnayakuni, R and Bowtell, M (1999),"Dimensions of Information Systems Success", Communications of the Association for Information Systems. Vol. 2, No. 3.

Seddon, P. B., Bowtell, M. J., Patnayanuki, R., and Staples, D. S. (1997) "The IS Effectiveness Matrix: The Importance of Stakeholder and System in Measuring IS Success", International Conference on Information Systems, Proceedings of the International Conference on Information Systems, pp.165-176.

Schultz, Majken and Hatch, Mary (1996), Living with Multiple Paradigms: The Case of Paradigm Interplay in Organizational Culture Studies", The Academy of Management Review, Vol. 21, No. 2. pp. 529-557.

Serafeimidis, Vassilis and Smithson, Steve (1999), "Rethinking the Approaches to Information Systems Investment Evaluation", Logistics Information Management, Vol. 12, No. 1-2, pp. 94-107.

Serafeimidis, V., Smithson, S., (2000), "The Information Systems Evaluation in Practice: A Case Study of Organizational Change", Journal of Information Technology, Vol. 15, No. 2, pp. 93-105.

Serafeimidis, V., Smithson, S., (1996), "The Management of Change for Information Systems Evaluation Practice: Experience from a Case Study", International Journal of Information Management, Vol. 16, No. 3, pp. 205-213.

Serafeimidis, Vassilis and Smithson, Steve (1999), "Rethinking the Approaches to Information Systems Investment Evaluation", Logistics Information Management, Vol. 12, No. 1-2, pp. 94–107.

Shutz, Alfred (1953), "Positivistic Philosophy and the Actual Approach of Interpretative Social Science", Husserl Studies Vol. 14, pp. 123-149, Reprinted in the Netherlands.

Simmons, Pamela, (1996), "Quality Outcomes: Determining Business Value", IEEE SOFTWARE, 1996.

Smithson S. and Hirschheim R. (1998), "Analysing Information Systems Evaluation: Another Look at an Old Problem", European Journal of Information Systems, Vol. 7, No. 3, pp 158-174.

Strassmann, P.A. (1990), "The Business Value of Computers", The Information Economics Press: New Canaan, Connecticut.

Strauss, Anselm, Corbin, Juliet (1999), "Grounded Theory Methodology: An Overview", Qualitative Research Vol. III, No. 46, SAGE Publications, ISBN 0-7619-6243-3 (set of four volumes).

Stockdale, Rosemary, Standing, Craig (2006), "An Interpretative Approach to Evaluating Information Systems: A Context, Process Framework", European Journal of Operational Research, Vol. 173, pp. 1090-1102.

Symons, Veronica & Walsham, Geoff (1988), "The Evaluation of Information Systems: a Critique", Journal of Applied Systems Analysis, Vol. 15.

Symons, V.J. (1991), European Journal of Information Systems, Vol. 1, No. 3, pp. 205-212.

Tashakkori, Abbas, Teddlie, Charles (1998), Mixed Methodology: Combining Qualitative and Quantitative Approaches, SAGE Publications, ISBN: 0-7619-0070-5.

Thorp, John (2001), A Benefits Realization Approach to IT Investments, Wim Van Grembergen, Wim (Editor), Information Technology Evaluation Methods & Management, Hershey, PA, USA: Idea Group Publishing.

Van Maanen J. (1979), "The fact of fiction in organizational ethnography, Administrative Science Quarterly Vol. 24, No. 4, pp. 539-550.

Walsham, G., Waema, T. (1994), "Information Systems Strategy and Implementation: A Case Study of a Building Society", ACM Transaction on Information Systems, Vol. 12, No. 2, pp. 150-178.

Walsham, G. (1995), "The Emergence of Interpretivism in IS Research", Information Systems Research, Vol. 6, No. 4, pp. 376-394.

Walsham, G. (1995), "Interpretive Case Studies in IS Research: Nature and Method", European Journal of Information Systems, Vol. 4, pp. 74-81.

Walsham, G. (2006), "Doing Interpretive Research", European Journal of Information Systems, Vol. 15, pp. 320–330.

Ward, John and Daniel, Elizabeth (2006), Benefits Management: Delivering Value from IS & IT Investments, Publishing: John Wiley & Sons Ltd, England.

Watts, Michael (2001), Heidegger: A Beginner's Guide, Hodder & Stoughton Educational, London. ISBN: 0-340-80324-X.

Weber, Ron (2004), "The Rhetoric of Positivism versus Interpretivism: A Personal View", MIS Quarterly, Vol. 28, No. 1, pp. 3-12.

Weill, P., and Olson, M. (1989), "Managing Investment in Information Technology: Mini Case Examples and Implications", Management Information Systems Quarterly Vol. 13, No. 1, pp. 3-18.

Willcocks, L., (1992), "Evaluating Information Technology Investments: Research Findings and Reappraisal", Journal of Information Systems Vol. 2, No. 4, Pp. 243-268.

Willcocks, L. (1992), "IT Evaluation: Managing the Catch 22", European Management Journal, Vol. 10, No. 2, pp. 220-29.

Winogard, Terry (1990), "Understanding Computers and Cognition", Ablex Publishing Corporation, Norwood, New Jersey, USA, 1990, Fifth Printing. ISBN: 0-89391-050-3.

Yin RK. (1989), Case Study Research: Design and Methods. Sage, Newbury Park, California.