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THE EPISTEMOLOGICAL BASIS OF THE PHILOSOPHY OF INFORMATION

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ABSTRACT

There have been several recorded developments of methodological pluralism in the research of Information Systems (IS) over the last three decades. Various disciplines, as well as many research communities, contributed to this discussion. Acting on the same subject of science or researching the same phenomena does not automatically allow for shared understanding. The epistemological assumed conclusions developed by various researchers will vary profoundly in this multidisciplinary and international context, in particular. These types of assumptions have a substantial effect on the understanding of concepts such as research reliability, validity, quality and rigour. Thus, the substantial publications of assumptions of epistemological conclusions are almost compulsory, in effect. The goal of this paper is therefore to establish an epistemological structure that can be used to examine epistemological claims in IS studies in a systematic way. Despite of trying to justify and recognize research paradigms of Information System, the current research aims at presenting a generic understanding of epistemological knowledge within the context of IS. The main focus of this research is to specify the elements that can be counted as basis to be able to recognize similarities along with the differences between separate methods and approaches of IS. The consensus-oriented interpretivist initiative to conceptual analysis is seen as a guide to explain the epistemological context..

1. Introduction

Epistemology is the analysis of our knowledge- its origin, its limits, and its types, that would grant us the possibility of arriving to true information.. Moreover, understanding is essential to be able to deal with any source of information, while memory is a typical form of retrieving and saving information, and efficient methods for extending knowledge are reasoning and inference, hence epistemology follows many of the cognitive science methods. In reality, it is the way cognitive science is dealt with by a philosopher. Data, as is generally known, is an epistemologically essential asset, as the layperson understands it. It is necessary, since information is required. One stays naive without this. It is the sort of material that people equate with thinking, knowledge, and culture [1]. It is what teachers deliver; what individuals (hope to) learn in books and papers; what weighing devices they have; what plane and train schedules include; what agents are using to search out; what people (in wartime) are forced to disclose; and what to get by switching in to the evening news. It is this association between expertise and truth, as both are widely known, that has inspired experts to use mathematically detailed information codifications to develop more sophisticated theories[2].

Need for Information Clarifications:

If understanding is truly the way to learn, then it seems reasonable to assume that a more reliable account of understanding would produce a more credible knowledge. Questions related to issues raised by communication engineers can be counted as new horizon for philosophical questions. This is one of the reasons behind awareness theories that focus on facts. As the name implies, booths ought to present us with the needed information. The ones at airports and train stations are presumed to provide responses to questions about the arrival and departure of planes and trains. But the solution is not just any true responses[3]. They're not there to entertain customers on the general topic of trains, planes, and time with meaningful sentences, they are there to present specific information. This is all right. Without it, it is hard to find the truth. But misrepresentations are as meaningful as true statements. Nevertheless they are not the knowledge that the booths ought to provide. Their aim is to present to us with truth, and this is because knowledge has to be real, unlike language[4]. If any of the information the booths present about the trains is not accurate, then it is as if the trains' details were not given at all. Misinformation has been presented to people, but such information is no more a kind of knowledge than Easter chocolates are a kind of eggs. If nothing is real, with a lot of false beliefs, one can leave an information booth, but one will not leave with facts[5].

It's hard to leave with an insight when you have not been offered everything you need to know: facts[6]. Even if scientist of information theory value ordinary intuitions in specifying what facts are when developing an information theory - why else should one call it information theory?- ,one must carefully differentiate between fact based information that has to be true, and statements that have meaning but need not be true. Different uses of the word "knowledge" in computational science are recognized only as fields and points

- where reality appears to be meaningless[7]. Almost everything that can be placed into a computer's memory is counted as knowledge, i.e. everything that can be inserted into an "information" list. If it's not right, then it is either misinformation or information is incorrect. But it is still information according to this use. Hence, computers can't discriminate between "Paris is France's capital" and "Paris is Italy's capital" when such information is fed to the machine in such a way. When information is fed to computers, "truth" will be processed, extracted and used in precisely the same manner. Moreover, if valid sentences count as information, then false ones will count as information as well. They are used for the purpose of computing which is indistinguishable[8]. In the communication sciences, this attitude to information is common and skates blithely through utterly basic differences between reality and falsity, between context and knowledge. Maybe such differences can be skipped for other purposes. Perhaps they can be overlooked, for other reasons[9].

Yet one cannot build a theory of information while not accepting it as a cognitive science. Because such a theory connects information with "facts". Hence, no matter how intently people might believe that 'Paris is Italy's capital', 'pigs can fly', or 'Santa Claus exists', these statements cannot be related to reality. I.e. you can put these "facts", these falsified statements, in the database of a computer (or the head of a person for that matter), but that does not make them true[10]. These statements are not presenting the inquirer with any important details. Nonetheless, whether it is due to the inadequacies of the system (or ignorance of the person), the computer (or person) treats as knowledge. Knowledge (again, as is generally conceived) is information that is strongly connected to what the indications and physiological signs have. People claim the twenty rings in the stump of a tree suggest, they think, that the tree is twenty years old[11]. That is the data the rings carry (about the age of the tree). Through counting the lines, they come to learn how big the tree is. Likewise, a thermometer, the rising of mercury in a glass tube, implies the temperature is rising. That is the symbol of mercury's increasing amount[12]. This is the knowledge that the growing mercury holds and, thus, what they assume from utilizing this device. People often use the word "smoking" to describe this sentential substance (what people will come to know) so the context of the term, a context of the term in which smoke implies fire, must be closely differentiated from a textual definition of smoking in which the word "fire" (not the word "smoke") implies fire[13].

Information Systems (IS):

Work on information management (IS) is multidisciplinary and global in nature. In addition to Information System, several types of disciplines, such as computer science, business administration, sociology, and psychology, help describe the implementation, development, utilization of IT and IS. Additionally, the participation of several separate national science groups to the IS science debate is quite successful. It is conspicuous that IS research is internationalised[14]. In the future, IS study ventures that consist of role of researchers from more than one country would also be a normal owing to the change of research focus from local to international organizations. Publishing

study results in researched journals around the globe is maintaining a standard in alignment[15]. Research of IS could therefore has been considered as a great tradition of diverse methodologies, concepts, and initiatives to research. Several scientific fields and study groups prefer to follow distinct methodologies and approaches to science[16].

Between 2002 and 2010, researchers performed an empirical research which analysed 9 important Information System publishing outlets[17]. Review of 1894 papers published in European and American journals showed that qualitative methods is the dominant in research on IS done in the US mounting up to 75 per cent, whereas 45 per cent of papers published in European journals using qualitative methods. At the level of paradigmatic, the positivist paradigm characterizes the vast majority (86 per cent) of US publications[18]. Although European journals often primarily publish work focused on positivist concepts (62 per cent), they appear to be far more sensitive to interpretive analysis (37 per cent) than US journals. If such type of studies are focused on premises of epistemology, the paradigmatic European-American differences result in an epistemological discrepancy in orientation[19].

Working on similar research subject, or researching similar phenomenon of IS does not automatically guarantee shared understanding opposite to the context of really distinct and sometimes ambiguous epistemological assumptions. In this sense the apparent loss of understanding stems from various epistemological premises[20]. The knowledge of concepts such as reliability, validity, or research quality, particularly depends on these epistemological assumptions[21].That is clear, e.g., in the debate about positivist and interpretative work in the field of IS. On the one hand, potentially positivist researchers say an intersubjective research results are true.Thus, the rigor imperative is to choose and implement research methods that aims to reduce the individual researcher's subjective influence[22]. On the other hand, interpretive type of researchers are much more focused on proposals that are subjective and which are deemed relevant when individuals strive for the information[23]. The imperative here is selecting and applying research methods aimed at making the subject's influence explicit. The epistemological assumptions of Information System research is compulsory and significant in relation to these fundamental differences. However, the absence of (systematic) epistemological analyses of IS methods is obvious and thoroughly debated throughout the discipline[24].

In the discussion regarding premises of epistemology a significant level of customization is applied,as in the following case: various scholars are likely to concentrate on specific epistemological issues, in certain instances as a consequence of historical discourse in their field or study group[25]. Discussing the theories underlying a particular theoretical method will only concentrate on certain epistemological elements that appear to be more important to a specific case when designing a research project. Researchers other than those who initiated the study, although that they are part of the research community, would design the project concentrating on different testing approaches. This fact, i.e. that the researchers in the field might

concentrate on different epistemological element, may theoretically make the earlier description of such epistemological premises inadequate or even redundant[26]. The IS field is extremely dynamic. That leads to constant innovation in methodology. New research methodologies may require other or extra epistemological aspects to be considered or analysed than those previously addressed. Consequently, the appropriate discussion of the assumptions of the epistemological premises underlying IS research is a matter which ought to be taken into consideration both now and in the future for IS research. The goal of the paper is therefore to provide a structure for the study and systematization of the epistemological premises essential to IS research[27].

In this paper, an epistemological framework is suggested depending on analysing methods and surveying related studies in the field of IS. In order to arrive to such framework, a system consists of five questions on epistemology and a summary of chosen potential responses to each issue is suggested. In addition, there will be consideration of identified interdependencies for such epistemological claims. To illustrate the implementation of the epistemological system, the consensus-oriented interpretivist method to conceptual modelling is explored. Finally, the conclusions were shown as well as some possible future directions for research were suggested[6].

2. Methodology

In order to be able to build the system, we tried to locate some of the important literature in IS and applied it to critical analysis. Hence, a systematic literature review has been undertaken in order to specify the epistemological claims and methods applied. Particular IS papers and books were chosen especially from: Information Systems Research (ISR), Association for Computing Machinery (ACM), Management Information Systems Quarterly (MISQ), European Journal of Information Management (EJIS), and Information Systems Journal (ISJ); with the intend to specify the state-of-the-art's discourse and their epistemological premises.

Moreover, and due to the multidisciplinary nature of the research field, the framework designed considers only the most common epistemological aspects. In fact, the epistemological questions used in the field can severely vary from one epistemological paradigm to another. I.e. the epistemological context is influenced by the strategies and techniques within the paradigm. Hence, the philosophical-logical arguments would be superior to the empirical ones. Nevertheless, the claims should always apply to the empirical data of scientific work where appropriate. IS researchers have also made multiple attempts to analyse various research frameworks systematically while considering their different epistemological assumptions (see Table 1). They may also use one method for examining distinct "sociological paradigms".

Table 1 *illustrates the epistemological assumptions of IS research paradigms which are analysed in different research frameworks systematically*

References	Criteria	IS Research Paradigms
Understanding and Applying Research Paradigms in Educational Contexts[28]	1. Ontology 2. Epistemology	Interpretivism, Positivism
Methodological Paradigms in Educational Research[29]	1. Ontology 2. Epistemology 3. Methodology	Interpretivism, Functionalism, radical humanism and radical structuralism
Principles for conducting critical realist case study research in information systems [2]	1. Epistemology I: Knowledge Object. 2. Epistemology II: Knowledge Origin.	Diverse research paradigms of philosophical trendsand IS e.g. constructivism, functionalism, critical realism
Information warfare: A philosophical perspective[30]	1. Ontology 2. Epistemology. 3. Truth	Interpretivism, Positivism

They recognize the following paradigms: positivism, functionalism, interpretationalism, progressive liberal humanism, critical realism, constructivism, and structuralism. Several distinguishing parameters are provided, but the epistemological and ontological factors in particular have been explored intensively in literature of IS. Researchers concluded that this paper would take up the formal criteria-based methodology, in particular the detailed examination of epistemological premises. The primary objective here is not to categorize separate research paradigms of IS, but to identify the underlying epistemological (methods and paradigms) assumptions directly. This aims to answer a range of more distinct epistemological problems (including ontological and analytical aspects) than the previous methods. This is due to the continuous change and appearance of new facts within the science and epistemology framework at hand; No claim of completeness can be made here. Nonetheless, this method tried to address the broadest effective range of epistemological problem relevant to field.

Epistemological Framework:

The consideration of problems of epistemology will be regarded as an open topic, at least for the time being. For this reason IS scholars think that no hypothesis that stems from a science and philosophy perspective can be binding. However, the social-collective or individual identification of the perspective of epistemology involves thorough disclosure of the epistemological assumptions put forth. Therefore, epistemology should be interpreted as the philosophy of how individual analyse and have awareness of what is believed to happen. It discusses the queries of how person can get to 'real' cognition. In order to conclude, essential problems of epistemology

should be distinguished from each other and will be addressed in the context of an epistemological frame of reference. The idea behind this structure is the clear breakdown of epistemological problems that are particularly important to IS study and that are sometimes addressed separately (see Table 2). In the IS literature, Question 1 is about the relationship between cognition and cognition object and Q: 2 (ontological aspect) is concerned with the nature of a 'true' universe were explored intensively. Both are central to positivism and interpretative debate.

Question 3 deals with the roots of knowledge, while Question 4 is about the principle of reality that has not yet been commonly regarded in the literature of the IS science. Nonetheless, this dimension is rather significant throughout the study, for example: (a) the effect of language on science; (b) analytical modelling and modelling throughout general; and (c) research outcomes truth/interpersonal validity, etc., and Q: 5 is on the means of information attainment (methodological element) were also explored in recent literature.

Table 2 *illustrates the Epistemological Framework which includes breakdown of epistemological problems that are particularly important to IS study*

1. How does cognition relate to the object of cognition?	Constructivism: cognition is constructed through human interaction with the subject	Epistemological realism: rational cognition is possible as an independent truth.	
2. What is meant by object of cognition? (Ontological aspect)	Ontological idealism: The 'world' is a system based on human consciousness.	Ontological Realism . The world exists regardless of human consciousness, for instance, regardless of processes of thought and expression.	Kantianism: we cannot access the (noumen) but only we can access the phenomenon that is based both on the human mind and the senses.
3. What is the origin of cognition?	Rationalism: Thought emerges from the mind. Such knowledge based on lack of experience is referred to as innate knowledge.	Kantianism: Pure reason and Perception # are our cognitive sources. Thoughts without substance have no meaning; cognitions and relation.	Empiricism: cognition comes from meaning. Such an experience of Knowledge is referred to as postérieureum or empirical knowledge.

4. What does actually a "True Cognition" mean? (Truth concept)	Consensus truth theory: if acceptable to the group, a statement is true (for that group). .	Correspondence Theory of truth: True statements are those corresponding to the elements in true world.	Semantic truth theory: the difference in regard to the truth of objects is conditioned on the meta-language used.
5. What is the way to achieve cognition? (Methodological Aspects)	Deductive Method: deductions from first principles or assumptions are the standard way to achieve cognition.	Inductive Method: our experiments and experience leads to our ability to generalize individual cases to universal principles.	Hermeneutic: The pre-comprehension of the entire context affects the understanding of a particular phenomenon.

How does cognition relate to the object of cognition?

This type of question, often considered as the core of epistemology, deals with cognitive relation between the subject and the perceived object. The problem is whether our cognition is the outcome of pure reason or it is only a reflection of experiment and experience. Two major answers exist: it is possible to accept objects of cognition as parts of an independent reality from an epistemological reality perspective. Epistemological realism claims that objective cognition is possible and offers appropriate measures in order to eliminate subject-dependent distortions of cognitive reality. Since epistemological realism believes that an 'objective truth' perception is feasible, it is founded on presumption of ontological reality (Q: 2, a). Moreover, a positivist combination of epistemological and ontological realism is introduced to IS research. As for the constructivist school, cognition is subjective, i.e. "private". Thus the subject determines the relation between cognition and the cognition object. Here the spectrum extends from the presumption that the speaker 'interprets' the perception of an 'objective truth' to the belief that perception is 'internal' because "objective reality" for certain objects does not occar.

Ontological Aspect (Objects of Cognition):

Ontology in IS research is related to the question of reality and how might the IS science be a reflection of such reality or a reflection of the real world, hence the ontological questions would be related to what and how IS research is dealing with. The ontology shows its importance as a context for this epistemological study by examining objects alluded to in the process of knowledge acquisition. For IS science, this means: What is the object of study for epistemology? The cycle deals with life and essence of reality outside limits of the subject's true imagination.

If researchers assume a real world, which is cognition independent, for example, irrespective of the processes of thinking and speech, they are specified as ontological realists. Here, it is necessary to consider materialism as

an intense type of realism. It implies that persons and structures are made up or reducible to energy, brute structures, or events. That stance is based on Object – Paradigm of subject.

If researchers think that abstract or theoretical beings have a nature that is 'neutral' from the material universe, or if they see nature as a structure that depends upon human consciousness, then such stances can be depicted as ontological idealistic stance. Accordingly, idealism can be considered as the pre-eminence of mind, spirit, or language (Materialism, Q: 2, a), that would be if, for example, the presence of a material world that is independent of human thought and expression is negated.

Kantianism would be the stance that tries to close the gap between these two stances, i.e. the one that tries to present and idealistic position without denying the existence of the real world. Nonetheless, such Kantian position would insists that the world that we encounter is only appearances, while the real essence of it is not accessible.

What is the origin of cognition?

The question of the origin of cognition is related to the fundamental perception capacity. The importance of this problem in IS research becomes apparent when it is formulated as follows: where does our intelligence come from? Experience is known to be one type of information (sense impressions). Knowledge based on experience is called background knowledge and the empirical knowledge. The presumption of this source of knowledge is often geared towards the theory of natural sciences and empiricism. The conceptual efforts of the subject may make an object a matter of cognition. *A priori* knowledge is called non-experience-based knowledge. Supporters of rationalism, also often identified as supporters of innate knowledge, reflect the belief that the mind is the source of knowledge. Kantianism may be called a conciliatory stance that accepts both experience and intelligence as sources of cognitive. According to Kant, neither of these attributes can be preferred to another: no entity can be apprehended without a sensory dimension, and the no sensory entity can be understood without mental cognition. Thoughts without content are meaningless; cognition is blind unless it is associated with sensory perception.

What does actually a “True Cognition” mean?

The question how humans are able to achieve ‘true’ cognition is central in epistemology. This applies more intuitively to how "true" knowledge is potentially obtained and how the "rightness" of knowledge must be checked. Most received answers to this type of question are presented in depending on the correspondence theory of truth. As per this theory, the truth emerges as a result of a relationship developed as the comparison or equivalence of two relations. The first relatum is called declaration; the second relatum is refers to the facts provided by the “reality of objects”. The former is categorized as false or true through the comparison of such statements with the real events. Therefore, facts act as inducers of truths for declarations from correspondence viewpoint, because of their assumed objective status. Wittgenstein formulated

such position logically [31] as an effort to further operationalize correspondence.

Principle of consensus: according to the principle of consensus in its basic form, facts are derived from the consensus of all; i.e. an argument is valid because it is appropriate to all under perfect and desirable circumstances. For example, if all agrees on describing a certain entity in a certain way – to twit for example – then such word will be effective way of communication for all, and they all will understand it in the right way.

Reality assertions concern population of specific category, which must be interpreted as applicable to that specific class: i.e. For group, a particular statement is valid, when it is appropriate for the community under ideal and optimum conditions. This definition of reality means that in the sense of a measure of fact nothing remains or is true, and may not be obvious to the perceiving community / group. Therefore it is not a sufficient prerequisite for the quest for understanding and reality that there should be 'objective' evidence or entities in the actual world.

What is the way to achieve cognition? (Methodological Aspect)

Epistemology's analytical nature poses the issue of how people interpret issues. This point addresses the ways knowledge is acquired. An inductive approach to cognition. Induction is comprehended as a generalisation from specific cases to universal phrases. The transformation from (empirical, observed) specific scenarios of case to universal law is inductive inference. This is a tool also used in the natural sciences. Nonetheless, information might be inferred by the deductive approach as well. Deduction is the derivation, using rational premises, of an argument from claims (hypothesis of Thesis A - A1, –, An). It is deriving specific case from universal statement, such approach is the one used in mathematical schemes for example.

The "hermeneutic loop" is the basic analytical element of hermeneutics. The basic goal is to provide a way to interpret documents. The hermeneutic circle here explains the process of reading texts against the background of an earlier understanding of the whole. This understanding influences how a given text is perceived. In turn, text itself transforms knowledge of the whole.Therefore, as per hermeneutics, a chain of (previous) learning governs the cycle of obtaining information, gaining new knowledge and thus having a deeper comprehension of the whole. Hermeneutics are also regarded as a technique, because both such documents and interpretations of the 'true world' are not self-evident, but have to be understood according to learning process.

Consensus - oriented interpretivist approach to conceptual modelling:

Conceptual models are perceived as design objects that are critical elements in an IS design cycle as well as constructions, methods and instantiations. The designed artefacts of IS and the problem solution are one of the main problems when it comes to designing and implementing IS. In reality, a miscommunication between company managers and IS designers has resulted in many IS technology projects failing. Conceptual modelling is a widely known way of solving this question of communication. Conceptual modelling is extensively discussed within the IS discipline. Every epistemological theory

addresses the word model (or conceptual model). Here, the idea of conceptual modelling is seen in the context of the consensus-oriented interpretative method in the essential linguistic method tradition. The consensus-oriented methodology is focused on the following fundamental epistemological principles, centred on the epistemological paradigm established previously.

How does cognition relate to the object of cognition according to Consensus-oriented epistemology?

The impact of subjects in the process of cognition is attached to a consensus-orientated approach: cognition is viewed as subject-related. A particular language that the subject uses is the principal reason for this subjective effect. This means that language is used to build an experience in the real world; on other perspective, language transforms the way a certain situation in real world is perceived. In this context, language offers concepts and categories that predispose cognition. As languages are normally used to be shared in a linguistic knowledge acquisition community, can be viewed as a social process. In that context, the consensus-oriented method reflects interpretativism practice. Here, it accepts not only cognition subjectivity, but also the existence of a real world, independent from human consciousness. Against this context a philosophical model can primarily be interpreted as verbal design of condition in the physical world.

Ontological Aspect (Object of Cognition) according to Consensus-oriented epistemology?

The essential believe here is the presence of a physical universe, which is outside of human thoughts and voice, and remains outside human awareness for this purpose. Thus conceptual models are intended to describe elements that are the branches of the real world. Models which are conceptual are also viewed as factors of process of a design science to solve a problem of real-world.

What is the origin of cognition according to Consensus-oriented epistemology?

It is possible to make both *a priori* and empirical statements, which might form the basis of conceptual models. Therefore computational modelling achieves its findings by analytical interpretation of the contents of the experiment, as well as through application of IS model and observation.

What does actually a "True Cognition" means according to Consensus-oriented epistemology?

The definition of reality is important specifically in terms of knowing what assertions of the 'real' logical paradigm are. Researchers develop a concept of truth with a schema theory of truth which is always relative to a language (objective language). At the same time, it is presumed that a meta-language exists that contains predicates of truth relating to claims of language describing the entity. All languages in the linguistic cultures eventually appear. Consensus theory of truth, on the other hand, confirms that a statement is true for a group, if it is appropriate to this group.It is clear that fact is viewed as subjective, both in the sense of the schema theory of facts and in majority theory. Truth is related in first case to language used to formulate statement. In the end, such

languages are the property of a linguistic group. For second example, fact is proportional to the culture where agreement has been established on the reality of, or the non-truth of, an argument. The basis of verification of truth is definitely related toarticle exchange of speech. Having a consensus within class, therefore, also proves the presence of a community of people that are using a specific language.

Some might believe that reality arises from the theoretical agreement of linguistic group, in a particular approach of consensus-oriented to conceptual modelling. Thus, fact is deemed as introduced by a language (theory of semantic reality) and relative to a collective understanding (consensus facts theory), of a particular linguistic culture. A statement is true as per consensus truth theory if, and only if, it is accepted to everyone. Considering business issues and IS solutions implicates reducing 'everyone' to a smaller size group is allowed.The concept of consensus truth theory, modified to this effect, could be in this context: a claim is accurate (for a group), if and only if it is understood by the group. This means that the fact is proportional to the community understanding and their established agreement on such fact, or their agreement on the non-reality of a specific assertion. Several modelling languages, for example extended event-driven process chain (eEPC) or entity relationship model (ERM), can be used to express the statements within conceptual models. Via this, templates may be used as a formalized way of agreement reporting. Here the formalized language of modelling functions as the language of objects (L). A language which is natural, like English, could then be used to explain whether statements are 'correct' within perceptual information model. Accordingly, it includes the predicates of reality with respect to object language-based assertions and serves as Meta language (M). And the cultural group exchanges of the two languages.

What is the way to achieve cognition according to Consensus-oriented epistemology?

Conceptual models contain knowledge of both *a priori* and empirical studies. It is necessary to reach both inductive and deductive premises, first in the sense of constructing the model and, secondly, in the sense of testing of facts. If single declarations are interpreted in the sense of model creation on the basis of a set of individual tests, e.g. in the context of reference modelling, then the relevant procedure is that of induction. However, the creation of an information model can also be accomplished deductively, for example by affixing object-class-specific attributes to model elements based on their linkage to certain classes of objects. Confirmation of truth is based upon the interpersonal verification process. The formalized linguistic claims found in a conceptual model are logically decomposed (deduction) before they are accessible for verification of reality as elementary claims. It is achieved by a panel of professionals that requires agreement. The key instruments are observation, experiments, interviews and text interpretation. In the scenario of business-specific models, for example, with one single case, the authenticity of declarations in the model can be verified.

However, in case of reference model or template, a generic different individual verifications (induction) abstractionis needed. This indicates that the new, primarily observational, testing approaches are used in the sense of the interpersonal evaluation process. Therefore, an approach of consensus-oriented is defined by interpretative stance that is primarily informed by the researchers' essential linguistic approach. Conceptual models in this context include formalized linguistic assumptions that are to be checked for relevance in conjunction with specific methodological testing methods. In order to secure coherency and agreement, this is achieved by representatives of a linguistic group. Factors of truth-semantic theory and the general agreement theory also are perceived and utilized

3. Conclusion

Work into information systems takes place within an international and multidisciplinary framework. Thus, the field of IS defined as a significant tapestry of various methodological initiatives. Here a structure of epistemological model was established for comprehensive study of the epistemological premises of different frameworks and methods in IS. The systematization of structure is to introduce fresh impulses into debate on epistemology in research of IS by providing a comprehensive viewpoint on multidisciplinary and foreign studies on IS. In addition, the epistemological framework was applied to the conceptual modelling approach based on consensus-oriented interpretations. Epistemological considerations have been introduced in IS science to identify and distinguish between distinct empirical methods, for example, interpretivism vs. positivism (based on both Questions 1 & 2) or empiricism vs. rationalism (Q: 3). Such methods, usually called paradigms, frequently coexist over the same amount of time. Based on these epistemological distinctions, various methods continue to establish distinct oriented study. They pose different types of research queries and propose alternative ways to interpret the theoretical and practical research findings.

They also establish independent understandings of such definitions as rigour, consistency and truth. Against this context, it was concluded that: IS paradigms should be studied (once again) against the backdrop of epistemology with the help of the structure established in this paper.What are further impacts of epistemology on a particular approach, framework, or method of research? What additionally epistemological questions would other IS researchers pose about a specific piece of research? The purpose of the epistemological framework is to highlight the essential epistemological perspectives relevant to field of IS research. Paradigms of IS analysis sometimes include more than single dimension epistemology, such as interpretivism and positivism (Questions 1 & 2). This aspect is to be taken up by the range of arguments presented in our epistemological structure.Through separating distinct epistemological problems, it aims to establish a clarity that encourages further study of the interrelationships between different epistemological concerns. In this paper an explanations of such interdependencies has been provided, such that the first step is known to be the formulation of epistemological problems.

Epistemology is used to analyse the paradigms and methods to IS science. The implication here is preparing the methods of research as 'belonging' to specific paradigm and therefore will have the same epistemological presumptions. Although the above statement is always more focused on the tradition of thought than on empirical theory, the following problem arises: are the results of such paradigms necessarily the outcome of those corresponding methods of study? This problem emerges in the hunt for possible pluralism in IS science: if specific study approaches are less "epistemologically armed", will this free up space for multi-method IS analysis through distinct science paradigms? The collection of problems raised within the system are clearly available to facilitate the clear epistemological review of methods of research.

The aim of the epistemological review undertaken in this research is to help and promote quest for pluralism of methodology in Information system. The first step is done by explicitly distinguishing between particular epistemological positions. With respect to the necessity of re-focusing the initial and philosophical-logical gaps, scholars recommend exploring what the various methods are, or are not, in general in terms of epistemological roots. Although contemplating the relations between empiricism and rationalism, scholars (also in IS) are still operating, for example, on describing the subject's effect on the information gaining method (Question 2) to cross the gap between positivism and perception. The proposed structure aims to add clarity to distinct original epistemological principles important to IS study with the aid of basic, yet separate epistemological issues.

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