

THE DOMAIN OF A FIRST-PERSON PERSPECTIVE SYSTEMS ANALYSIS

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Abstract

Information systems as well as work systems are no longer emerging but emergent. An idea of emerging systems with final forms is replaced by that of emergent systems with continuous changes (Truex et al, 1999). Along this change, business professionals are inevitably expected to take the initiatives in IS development. The existing systems analysis has been for IT specialists. Therefore a different systems analysis is required for business professionals. It is a first-person perspective systems analysis (1ppSA). The need for the 1ppSA has been economically and sociologically justified. However, the research of the 1ppSA has drawn little attention from researchers. We consider it is because the domain of 1ppSA is not yet articulated. In order to identify and locate the domain, we build a map of SA, a topology of SA, and then use philosophy and its history to examine the validity of the topology of SA. Philosophy is used for examination because it provides us with epistemology and has been considered a fundamental discipline for sciences. Through the examination it is made clear that the domain is independent from that of the others. It is also noted that its foundational method is considered a phenomenological one.

Keywords: Systems analysis, first-person perspective, philosophy, phenomenology.

1 INTRODUCTION

There is a variety of systems analysis (SA) when SA is considered a process that results in the determination of information systems (IS) needs. The aim of our research is to identify and locate the domain of a first-person perspective systems analysis (1ppSA) among them. The 1ppSA has drawn little concern from researchers. We consider it is because the domain of 1ppSA is not well articulated and thereby the method is not well recognized among researchers.

We can see the needs for the 1ppSA as follows. According to Truex et al. (1999), information systems (IS) as well as business or work systems are no longer emerging systems but emergent ones that continue to evolve, therefore business professionals are inevitably expected to take the initiatives in IS development. Because of no more expectation for stable IS, an idea of emerging systems with final forms are replaced by that of emergent systems with continuous changes (Truex et al, 1999). This change also drives up a diversification of SA. Here, we see SA by business professionals, ie, a 1ppSA, with the support of IT professionals.

Advancement of information technology (IT) has brought about this move to the emergent from the emerging. The move is economically required as well, politically unavoidable, and also sociologically desirable.

Economically it is likely for the move to be inevitable. Knowledge workers have gained more power while companies have lost it against them. In the decreasing transaction cost brought by IT, Hagel et al (2010), in their book, describe some of the inevitable changes impacting businesses, a shift from push to pull. They explain how the world is currently moving from valuing stocks of knowledge to flows of knowledge. The value of the stock in US firms has constantly decreased from about 4 % to only 1% on ROA over the 40 years (Deloitte, 2011), suggesting that many companies will disappear in a decade unless substantial actions are made. They argue that companies cannot help but make a big shift from scalable efficiency (economy of scale) to scalable collaboration among knowledge workers and customers. Their book is about scalable pull, embracing hundreds of thousands of participants in pull platforms. Companies cannot keep potent knowledge workers only by pushing ideas from management. Companies need to make possible collaboration among knowledge workers in pull platforms more than ever.

The move becomes politically unavoidable. An organization is not always a rational entity that is presupposed in the conventional SA. This implies “a shift from a view that an organization is something ‘out there’ and reified as is common within organizational theory, to a view that an organization is internal to each of us ...” (Goldspink and Kay, 2003). A new business practice emerges from several practices co-existing in an organization. As mentioned by Feenberg (1991, p.14), technology is not a destiny but a scene of struggle. It is a social battlefield, or perhaps a better metaphor would be ‘a parliament of things’ on which civilizational alternatives are debated and decided. Truex et al. (1999) say “the dialectics of the process center politics, conflicts and struggles between social forces in the organization.” In these scenes, main actors are not SA specialists but business professionals themselves.

The move is also sociologically desirable. Giddens (1993, p.28) says, “The more we know the conditions of our own actions and the overall development of our society, the more we are able to gain influences over various affairs of our lives.” Bourdieu (1991, p.90) also said, “Ambition of sociologists is to become free from the principles which govern the present by highlighting them.” One role of sociologists should be to give weapon rather than to preach down to people (Bourdieu, 1991, p.121). Therefore it is desirable for workers to have weapon that enables them to practice SA by themselves in order to innovate themselves.

SA is a core of IS development (ISD), therefore, the need for the 1ppSA coincides with the move. However, the research of the 1ppSA is inactive or low-key among researchers only with a few

researches related to the 1ppSA. Researches such as Alter (2002), Checkland (1999) and Whitaker (2007) could be considered of the 1ppSA. Alter (2004) advocates systems analysis by business professionals by saying, "An effective systems analysis method for business professionals could help them analyze systems for themselves and could help them communicate with peers and IT professionals." His idea is similar to the ideas of sociologists as mentioned above.

There could be a few possible reasons for the 1ppSA being low-key among researchers. One may be that the domain of 1ppSA is not well articulated. Another may be that the 1ppSA is considered a derivative of the existing SA. Still another is that the basic method of the 1ppSA is not shared among researchers.

There are few researches on the domain of the 1ppSA except Checkland (1999), however he mainly discusses the process of SA from the perspective of systems thinking, not the domain of SA. Therefore, we have to identify and locate the domain of the 1ppSA among a variety of SA. We do it by making a map of SA, a topology of SA, thereby locating the existing approaches on the map and finding a separate, untouched domain for the 1ppSA.

We construct the topology of SA by reviewing the prior literature and examine its validity through philosophy. We use philosophy and its history or development instead of empirical data to examine the topology of SA. Philosophy and its history are used here because it has been considered the most basic discipline for sciences (Rorty, 1979, p.132; Husserl, 1999, p.43). Through the examination, the theoretical existence of the 1ppSA is expected to be made clear.

It is necessary to mention the scope of SA. Although there has never been its universally accepted definition, SA is usually used as a term that collectively describes the early phase of systems development (Whitten et al, 2004, p.186). It is generally considered that SA consists of requirements determination, requirements structuring, alternative generation, and selection (Hoffer et al., 2002, p.200). Our research focuses on an approach toward the requirements structuring. It means that we are concerned with the early part of SA.

In the sections below, firstly we review prior literature. Next we build a hypothetical model for a topology of SA. We then transform the hypothetical model into a working model expressed in philosophical terms for examination. Next we examine the working model with major philosophies each of which is considered different from one another. Finally, we present some brief discussion and conclusions.

2 REVIEW OF PRIOR LITERATURE

Firstly we review prior literature by classifying them into two types. One is related to SA in particular. The other is to IS development (ISD) in general.

There are few previous researches concerning the topology of SA. We have to go back to Wood-Harper and Fitzgerald (1982). They classified SA approaches used then by a classification scheme using general systems and science. The research was considered useful then, but it is a practical classification of the existing SA approaches of those days. Therefore, it is not exhaustive so that it does not include the 1ppSA.

Since there is no relevant literature directly related to our research concern, there is a need to expand the scope of prior literature. SA is a phase of ISD. Therefore, literature concerning classification of ISD is then reviewed as follows. Reviews of ISD literature is expected to bring ideas for constructing the topology of SA where the 1ppSA is to be located.

In the area of ISD classification, a framework by Hirschheim and Klein (1989) is considered influential. They developed four possible stories of ISD by referring to the four paradigms by Burrell and Morgan (1979), and then verified the validity of each story also by using the Burrell and Morgan's paradigms. Their framework is based on the epistemology of subjective and objective and the

ontology of order and conflict that Burrell and Morgan proposed. Their framework is very useful to help IT practitioners and researchers comprehend the diversity of ISD practices. Although their framework does not include the 1ppSA, their efforts in applying the paradigms of Burrell and Morgan is insightful also for our research because they paved an avenue to use a term 'subjective' in the field of IS research. The 1ppSA is closely related to the subjective perspective of business professionals. Therefore, one of dimensions of the topology we construct is considered this distinction between subjective and objective.

Iivari, Hirschheim and Klein have been making efforts in establishing IS discipline by building a framework for a body of knowledge (BoK) of ISD. Iivari and Hirschheim (1996) evaluated the existing eight ISD approaches from the perspective of organizational roles and informational requirements. Their classification is insightful but too general as far as SA is concerned. Iivari, Hirschheim and Klein (2004) see as a problem that the subject matter of IS research has become rich and diverse and that this diversity has led some to question whether IS research has any real accumulative tradition. In order to overcome the problem, they promote the idea of a BoK by proposing a four-level hierarchical coding scheme. Their interest is related to a framework for an action-oriented BoK of ISD in general while our interest is to the domain of SA in particular. However, their efforts is insightful because the classification and coding scheme based on the framework are thought to help establish IS discipline. Therefore, following their idea that the classification and coding scheme help establish a discipline, we also build a map for the classification of SA, a topology of SA, to establish the domain of the 1ppSA

In democratic societies and companies, participatory design has been practiced. Although the 1ppSA does not always mean only participation, a sort of a first-person perspective has been a concern in participatory design particularly in Scandinavian countries. An influential paper in the area of participatory design is considered Kensing and Munk-Madsen (1993) who created a model of the communication between users and IT professionals. The model is based on two distinctions. One is related to three domains of discourse: users' present work, new system and technological options, and the other is to two levels of knowledge: abstract knowledge and concrete experience. Also using ethnographic techniques and intervention, Kensing, Simonsen and Bødker (1996) proposed the MUST method for participatory design based on the model developed by Kensing and Munk-Madsen (1993). For our purpose, it is important that they clarified six knowledge domains concerning IS design. It is thought to be helpful for IT designers and users to have successful communication paths. Although, the six domains are not related to the domain of SA, their concern to users' present work and concrete experience is insightful for our research. Participation and user's concrete experience at the present work means the importance of working knowledge at the workplace in ISD. Here we use a term 'working knowledge' as implicit and explicit knowledge working at the workplace. It is the working knowledge that it is often difficult to capture by observation and interview. We take the working knowledge into consideration in building the topology of SA.

Based on the findings mentioned above, we build the topology of SA in order to identify and locate the domain of the 1ppSA.

3 A HYPOTHETICAL MODEL FOR A TOPOLOGY OF SA

The aim of our research is to identify and locate the theoretical domain of the 1ppSA. The task is similar to making a map that is made of two dimensions of latitude and longitude. Our trial to build a topology of SA, a sort of map, is the first one in this area. Therefore we keep our trial as simple as possible. We firstly build a hypothetical model for the topology of SA in two dimensions.

For latitude as the first dimension, we introduce a distinction between the external entity and the internal entity. The idea of this distinction is brought from the distinction between objective and subjective in Burrell and Morgan (1979). Therefore, this distinction finally results in objective

	Direct concern to working knowledge	Indirect concern to working knowledge
Objective (external)	3ppSA (Third–Person Perspective SA) SA Specialists practice SA	exoSA (Exogenous SA) Dependency on external information
Subjective (internal)	1ppSA (First-Person Perspective SA) Business Professionals practice SA	endoSA (Endogenous SA) Dependency on ideas of the strong

Table 1: A topology of SA

knowledge and subjective knowledge, as well as the types of knowledge acquisition process appropriated in SA practices, that is, the objective stance and the subjective stance.

For longitude as the second dimension, we introduce the distinction related to the existence of a concern toward working knowledge and work systems at the workplaces. This distinction is thought of from the importance of working knowledge in participatory design mentioned before. It is therefore a distinction between a direct concern and an indirect concern to working knowledge and work systems at the workplace, that is, use and non-use of working knowledge

The combination of the two dimensions results in four quadrants shown in Table 1. Briefly speaking, the first dimension, latitude, is related to who are concerned with the creation or acquisition of knowledge in SA. The second dimension, longitude, is related to what are used in SA. And, each quadrant is related to how knowledge is created or acquired. The more detail reasons why we take these dimensions are also found in the following explanation of each quadrant.

In making a map, it is expected that we can identify and locate an unknown area, ie, the domain of the 1ppSA, through the mapping of known areas on the map. Before going to the hypotheses testing which locates the unknown area, we make a brief mapping between the existing types of SA and the quadrants in the topology of SA.

In the left side of Table 1, there are two quadrants we name as a third-person perspective SA (3ppSA) and a first-person perspective SA (1ppSA). We can find the conventional approach of SA at the intersection of the external and the direct concern. A specialist as an external agent observes, surveys and analyzes the working knowledge and work systems. His or her observation and analysis are of a third person perspective because he or she tries to perform objective analysis on the assumption of rational organizations in favour of realism. Here we label this quadrant as a logical type of a 3ppSA. JAD and RAD are regarded as derivatives in this quadrant as applications of the 3ppSA with enhanced user participation.

We find a logical type of a new SA at the intersection of the internal and the direct concern. In this quadrant business professionals practice SA by themselves with the some occasional helps of SA specialists. SA in general includes several phases with a logical design at the final phase. Business professionals are supposed to practice primarily the early phases of SA. Here we label the SA in this quadrant as a logical type of a first-person perspective SA (1ppSA).

In the right side of Table 1, there are two quadrants we name as the exogenous SA and the endogenous SA. Both of them have indirect concern to working knowledge and works systems. They show their concern to the pre-existing knowledge rather than to working knowledge.

We find a kind of SA, that depends the external knowledge, at the intersection of the external entity and the indirect concern. In short of talented systems analysts, it is IT practitioners who search for external knowledge from the beginning, instead of practicing the 3ppSA. There is so much external knowledge readily available at present that IT practitioners tend to seek external knowledge that fits in

with their thinking and behaviour. There is the belief that a better solution could be obtained from external software vendors (Lyytinen, et al, 1999). Therefore, organizations are keen to learn from external sources and are generally eager to accommodate new technologies (Lyytinen, et al, 1999). The fact that there are a wide variety of software packages embodying best practices tends to promote their dependency on external knowledge. The importance of external knowledge is becoming greater in ISD contexts in recent years. Among the benefits of external knowledge are keeping pace with technological changes and managing the downside risks of systems development (Lyytinen et al., 1999). As a result, it is not uncommon that many IT practitioners tend to produce IS requirements in reference with external software packages as a template for requirement structuring. We label the SA in this quadrant as a logical type of exogenous SA (exoSA).

We find another kind of SA, that focuses on a will of the power, at the intersection of the internal entity and the indirect concern. There are IT professionals or SA specialists who pay their concern mainly to the voices of top management or big figures in the organization prior to paying attention to business professionals or workers at the workplace. Often in authoritative or traditional organizations top management themselves innovate or change their organizations with thier own plans or ideas often coming from external consultants. They often do not think that they have to listen to the voices at the workplace, and also sometimes think that they have to enforce changes at the workplace. In these circumstances they tend to use a silver bullet theory that IT itself has the power to create organizational changes. Since the silver bullet is expected to change the behaviour of workers who use IT by enabling new work practices and preventing old ones, users are the intended target of change (Markus and Benjamin, 1997). This view of ISD is not new. In fact, under the name of “technological determinism”, it has been the subject of much academic debate (Markus et al., 1997). Therefore, this type of SA goes along with technological determinism often favoured by the logic of the strong or the power. Here IT professionals or SA specialists have a role to describe what the strong intends to do, and to inscribe the interests of the strong into IS (Latour, 1995). We label the SA in this quadrant as a logical type of endogenous SA (endoSA).

With the above discussion we have created the topology of SA which consists of four logical types of SA, located the existing SA in it, and found a possible domain of the 1ppSA.

4 A WORKING MODEL FOR A TOPOLOGY OF SA

In positive studies, theoretical hypotheses are transformed into working ones for test. Following this procedure we transform the hypothetical model for a topology of SA to a working model in order to examine it. In our research we examine it with philosophy instead of empirical data. Here we transform the hypothetical model into a working one with use of philosophical terms.

We use philosophy and its history or development in order to examine the topology of SA for two reasons. Firstly, modern philosophy is a study of cognition or consciousness, ie, understanding in particular. Philosophy has been considered the most fundament discipline for sciences after Kant’s epistemology-oriented philosophy was widely accepted (Rorty, 1979, p.132). According to Dewey (2008, p.22), philosophy can proffer nothing but hypotheses, but these hypotheses are of value only as they render men's minds more sensitive to life about them. With the help of philosophy we are expected to be more sensitive to the topology of SA, the 1ppSA in particular.

Second, for the necessity of history, activity theorist, Engestrom (1999, p.244) says:

“A host of different classifications and typologies have been offered, but each one of them seems to be equally arbitrary. The reason is that the classifications and typologies have no historical basis. As long as the historical steps of the societal production of models remain obscure, psychologists are bound to keep inventing their private favorite typologies.”

Following the development of philosophy, we create four simplified structures between subject (a person) and object in order to find relations between the hypothetical model and a variety of philosophies

Modern philosophy has been concerned with the elucidation of the problem of cognition. It has been the criticism against the theory of knowledge of ‘the agreement of subject and object’ which positivism presupposes. Philosopher, Takeda (2004, pp.54-70), mentions that we could have correct cognition, that is, truth if there were the agreement of subject and object. Understanding the impossibility of this agreement of subject-object created problems of belief conflict, such as a conflict between Catholicism and Protestantism that is difficult to be overcome.

Based on his research, it is thought that there are historically several types of belief conflict. We identified and illustrated them in Figure 1. The first one is that a person, ie, a subject, can have a right understanding of an object that is out there (Type 1 in Figure 1). This is usually called as the naive model. The second one is that every thought is incorrect (Type 2), the correct one being somewhere else. He calls this as Cantian model. The third one is that there are no correct weltanschauungs but a strong one (Type 3). He calls this as Nietzschean model. His translation of the truth problem into these belief conflicts reflects the historical development of philosophy. We use this translation for the testing of the working model.

$S = O$ Type 1	$S_1^{O_1}$ $S_2^{O_2}$ \vdots $S_n^{O_n}$ O Type 2
$S \Rightarrow O$ Type 4	S_1 S_2 \cdots S_n Sst Type 3

Figure 1: Simplified relations between subject and object

In addition to the historical development of philosophy on the plane of epistemology, we also use phenomenology of Husserl as the latest philosophy. Husserl no longer addresses the long-standing problem of the agreement of subject-object. It is well pointed out by Merleau-Ponty (2002, xviii), who describes, “We must not, therefore, wonder whether we really perceive a world, we must instead say: the world is what we perceived.” (Type 4) Husserl (1970, p.177) mentions: “As their interest is not aimed at the ready-made world, phenomenologists go back to the ways in which subjectivity has brought about and continue to shape the world through its concealed internal method.” Husserl changed the problem of agreement of subject-object to the constitution of conviction. This shift is endorsed by his sentence: “It can always happen that the further course of experience will compel us to abandon what has already been set down ...” (Husserl, 2002, p.144)

The development of philosophy can be summarized as follows. The problem of the agreement of subject-object was replaced with the problem of belief conflict, and further replaced with the constitution of conviction. The development of philosophy is considered useful for the examination of our model, because each philosophy continues to be worthwhile over a long period by weathering the hardships.

In the following, to operationalize the hypothetical model into a working model, we use subjective and objective, and subject and object as philosophical terms. As mentioned earlier, there has been a longstanding issue, the subject-object problem in the history of philosophy. The problem arose from the premise that the universe or world consists of objects or entities perceived by subjects or observers. This resulted in several standpoints about the issue of the relationship between subject and object. In

the following, we paraphrase each logical type of SA as a relationship between subject and object, and further replace the external and the internal with objective and subjective respectively.

Firstly, we discuss the 3ppSA, where SA specialists assume a view of rational organization, and apply it to all things and events. Therefore a SA specialist is considered an external agent who takes an assumption of God's eye view. An organization is regarded as an objective existence 'out there' that is separated from and can be observed by a SA specialist as an external agent.

The 1ppSA has a different relation between subject and object from the relation seen in the 3ppSA that the subject stands outside of the object as an objective observer. In the 1ppSA, the subjects reside within or around the object. There are multiple views floating in an organization. Success of innovation depends on accommodation or consensus among peers on the work systems prior to building IS. It is not an easy task to achieve accommodation or consensus at the surface level of knowledge captured by a SA specialist. Business professionals need to understand why and how their own specific views and attitudes toward their work systems have been constituted from a first-person perspective. In other words, to become free from the principles which govern the present, business professionals need to be aware of knowledge about the conditions and structures in between the subject and the object that govern their thinking.

The exoSA is a type of SA in which SA specialist or IT practitioners might face multiple conflicting views about the work systems and IS within the organization. In case of no criteria that determine which is appropriate among alternatives, or in case of no appropriate alternatives, IT practitioners tend to seek for an outside best practice instead of negotiation or own creation. This is the case that there are several views as subjective images among stakeholders. No single view dominates the situation. People do not think every view has the ring of truth, so that they seek for something best outside as an objective existence.

The endoSA is a type of SA in which SA specialists or IT practitioners might face multiple views about the work systems and IS within the organization. However, they think that they have a criterion that determines the best or the most valuable among alternatives in contrast to the situation of the exoSA. They do not mind what the objective reality is, and are simply agents who describe, as a subjective image, what the strong power tell about the work systems and IS. They believe that the best man wins, that is, truth resides within the strong discourse.

5 VERIFICATION OF THE WORKING MODEL

Since four logical types of SA are ready for test, we verify them from the philosophical standpoint. We examine whether each logical type of SA can be related to one of major philosophical standpoints. If it comes true, then we can regard a logical type of SA as an independent one that should not be confused with other types of SA. It means that a type of SA is not an application or extension of another type of SA. Each is worth attention and research, the research of the 1ppSA in particular.

We take into consideration major philosophical standpoints in a historical order, because philosophy developed and created a new standpoint by referring to the knowledge of the preceding philosophies.

5.1 Naïve ontology and the 3ppSA

Kant established epistemology in philosophy with his Copernican turn that inverted the traditional relation between subject and object. Kant (1998, p.110) says, "Up to now it has been assumed that all our cognition must conform to the objects; but all attempts to find out something about them a priori through concepts that would extend our cognition have, on this presupposition, come to nothing."

Until Kant's proposition, philosophers as well as the lay public had no doubt that the object 'out there' determines the cognition of the subject. Although epistemology entered into philosophy after this, most of the lay public still thinks that the object determines the cognition of the subject. This

traditional thinking is usually called as naïve ontology, where objective cognition is made possible by the unconscious assumption of God's eye view. It is the 3ppSA that is based on this relation between subject and object.

5.2 Kant philosophy and the exoSA

Kant (1998, p.110) continues, “Hence let us once try whether we do not get farther with the problems of metaphysics by assuming that the object must conform to our cognition...” His point is that the subject determines the object in some way. Knowledge is then found in the structure of the subject itself, instead of in an objective reality. This thinking belongs to idealism, and he made an extensive study about cognition of cognition, meta-cognition, i.e., the transcendental. His philosophy is, thereafter, called transcendental idealism.

In his philosophy, a human constitutes knowledge through inner intellectual mechanisms called as category, an original pure concept of synthesis, i.e. categories of quantity, quality, relation and modality. Kant (1998, p.213) says “by these concepts alone can it [understanding] understand something in the manifold of intuition, i.e., think an object for it.” Here, it is not warranted that all humans constitute the same knowledge through the categories although the categories are shared among them. It is the categories that only ensure human to be able to think.

There is a key idea ‘thing in itself’ as the object in his philosophy. Kant (1998, p.115) says, “we can have cognition of no object as a thing in itself, but ... as an appearance; ... mere objects of experience.” Kant (1998, p.115) says, “even if we cannot cognize these same objects as things in themselves, we at least must be able to think them as things in themselves.” Therefore, humans want to believe in the existence of an object, however cannot cognize it as thing in itself directly. As a result there is a possibility of multiple versions of cognition, often conflicting, about the same object as thing in itself.

In the exoSA, all internal cognitions are equally considered inappropriate or incorrect, thereby an external knowledge being introduced instead as an appropriate or correct knowledge. Therefore, it is the exoSA that fits this philosophy, because the distinction of multiple incorrect internal cognitions and a correct external knowledge is equivalent to the distinction between multiple cognitions among people and the same ‘thing in itself’ in Kant philosophy.

5.3 Nietzscheanism and the endoSA

About a hundred years after, Nietzsche appeared with a significantly different philosophy from Kant. Between Kant and Nietzsche there was an influential philosopher, Hegel. He inherited Kant philosophy, finished up the German idealism and published an influential book called as ‘Phenomenology of Spirit’ in which he described an evolution of consciousness through dialectics. Although it is very important in philosophy in general, we skip ‘Phenomenology of Spirit’ because it is considered a completed version of German idealism stemming from Kant philosophy.

It is Nietzsche who made a sweeping criticism over the modern belief that there should be one and only one truth and that human can reach it through reason. Since modern philosophy was completed by Nietzsche, Nietzscheanism deserves a discussion here. His idea of ‘will to power’ is a breakthrough to cognition. It transformed the traditional way of thinking in philosophy.

‘Will to power’ of a subject became a key to truth in his philosophy. “The valuation, ‘I believe that this and that is so,’ is the essence of ‘truth’” (Nietzsche, 2010, p.197). “Thus it is necessary that something should be assumed to be true, not that it is true” (p.197). “The hypothesis which gives the intellect the greatest feeling of power and security, is preferred, valued, and marked as true” (p.207). “The intellect sets its freest and strongest faculty and ability as the criterion of what is most valuable, consequently of what is true...” (p.207). Thus, he abandoned a traditional question about a relation between subject and object, and instead introduced power to truth with a concept of existentialism.

The endoSA goes basically with the idea of the strong person. IT professionals have ‘indirect concern’ to working knowledge and work systems, instead they firstly pay their attention to the ideas and plans of the strongest person in the organization. IT professionals work as an agent of the power at the moment or the would-be power in the future. This style of thinking and behaviour corresponds to human attitudes toward truth in Nietzscheanism. IT professionals believe that the idea of the power finally dominate the organization as often practiced with the silver bullet theory. It is, therefore, that they practice the idea of Nietzscheanism in organizations.

5.4 Phenomenology and the 1ppSA

Next, we take phenomenology but have to mention why we do so. Widely known philosopher in the 20th century is Heidegger, whose work is fundamentally based on phenomenology of Husserl as well as the ideas of Kierkegaard and Nietzsche. Social constructionism has also its roots in phenomenology as Berger and Luckmann (1966, p.20) put, “the method we consider best suited to clarify the foundations of knowledge in everyday life is that of phenomenological analysis.” Thus it is worth taking phenomenology here.

Husserl was the principal founder of phenomenology. He sought to study the structure of consciousness as experienced in a first-person perspective. Merleau-Ponty (1964, p.178) gives a consummate expression of a phenomenological world: “The world is all around me, not in front of me.” Husserl (1999, p.17) says “In all of its manifestations, knowledge is a mental experience: knowledge belongs to a knowing subject.”

Phenomenology is not concerned with an objective view like God’s eye view, but with constituting. “The phenomenological world is not the bringing to explicit expression of a pre-existing being, but the laying down of being. Philosophy is not the reflection of a pre-existing truth, but, like art, the act of bringing truth into being.” (Merleau-Ponty, 2002, xxii-xxiii) Laying down of being is made by phenomenological methods of epoche and transcendental reduction. “Things are in them not as they might be in a case or container, rather, things constitute themselves in these experiences even though they are not to be found in them in the real sense.” (Husserl, 1999, p.68) It means that constituting takes place in between the subject and the object.

Husserl admits that there are multiple views about the world and that they need to be accommodated.

“Prescientifically, in everyday sense-experience, the world is given in a subjectively relative way. ... In dealing with one another, we have long since become aware of this discrepancy between our various ontic validities. But we do not think that, because of this, there are many worlds. Necessarily, we believe in the world, whose things only appear to us differently but are the same.” (Husserl, 1970, p.23)

Because of multiple different views and of needs for accommodation, people have to understand their own conditions and structures by which their constituting or laying down of being is made. For this purpose, “[we go back] to the ways in which this subjectivity has, ‘has brought about,’ and continues to shape the world through its concealed internal ‘method’” (Husserl, 1970, p.177). Merleau-Ponty (1964, p.48) says it in simple words: “By a truly radical reflection, which reveals the prejudices established in us by the external environment, he attempts to transform this automatic conditioning into a conscious conditioning.” This radical reflection is made possible with phenomenological methods.

The 1ppSA is of a first-person perspective. It admits multiple views that need to be accommodated. It is the 1ppSA in which people attempt to transform automatic conditioning into a conscious conditioning in order to understand why and how their own specific views and attitudes toward their work systems have been constituted. Although its methods are not readily available, the idea of the 1ppSA is considered within that of phenomenology. Kosaka (2010) also shows that phenomenology can be considered a basic theory for the 1ppSA in terms of problem of knowledge, mode of knowledge,

and methods. Therefore it is reasonable to consider the 1ppSA as an instance of phenomenology, not that of other philosophies discussed above.

Based on the above discussion, we can see the theoretical existence of the 1ppSA where business professionals practice SA by themselves.

6 DISCUSSION AND CONCLUSION

In order to examine the existence of the domain of the 1ppSA, we constructed a topology of SA, ie, a map of two dimensions, one dimension being subjective or objective, and the other is concern or non-concern to working knowledge and work systems at the workplace. Since SA is regarded as a process that results in IS requirements, there appeared four independent types of SA on the map, each being supported by a different philosophy. The domain of the 1ppSA was identified and located as a separate, independent area on the map. Furthermore, practices often seen in real situations were also identified as independent areas. SA based on external best practices was justified by Kant philosophy, and the existence of SA using manager's ideas often related to silver bullet is supported by Nietzscheanism. As expected, the conventional SA, the 3ppSA, conformed to the naïve philosophy. The domain of the 1ppSA was theoretically supported, but also the foundational method of the 1ppSA was made clear as phenomenology. The practical usefulness of our research findings is that researchers can proceed to develop a method of the 1ppSA in less uncertainty and that they can develop the method based on phenomenology without searching from scratch.

Our research has some limitation. Use of philosophy is considered a very powerful test because philosophy is the most basic discipline for sciences. However, we did not have an exhaustive survey for possible alternatives. Therefore, this is not meant to rule out the need to explore other alternatives. Our examination of the domain is theoretical, so that each logical type of SA in the topology of SA is considered independent from each other. But this does not exclude a practical mixture of different types of SA in real situations. Therefore there remains a work to bridge a gap between our theoretical thinking and practices in real situations.

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