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Qualitative and Quantitative Methods are
Not Different from a Structural Constructivist Perspective

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[Slide 1]

Thank you, chair-person, for your kind introducing me.

I would like to introduce the concept of the structural constructivism.

This is a very new hyper-meta theory for the mutual understanding whenever there are two deferent positions where cannot usually understand each other.

I am afraid that I will not be able to explain it exactly, and give you wrong image.

But anyway, even if I fail in the explanation, I think you must be interested in this new theory.

[Slide 2]

First of all, I should indicate the issue of the conflict between qualitative study and quantitative study.

As everybody knows, usually, quantitative method assumes the reality of the world, and science should be objective.

Quantitative researchers often insist that qualitative method is subjective and not scientific.

On the other hand, qualitative researchers argue against these opinions from a relativist perspective or a social constructionist viewpoint, and so on.

[Slide 3]

This slide shows such antagonism as objectivist versus social constructionist.

Objectivist says:

Your work is 'wordplay' !

There is one objective world !

Your thoughts are useless!

We are absolutely right!

And Social Constructionist says:

Your research isn't truth too!

There is no objective world!

Your thoughts are short-sighted!

We are absolutely right!

So, it is very difficult to come to be some satisfactory settlement.

[Slide 4]

In 2005, Dr. Saijo published a book.

The title is "What is the Structural Constructivism?"

In this book, he proposed a new hyper-meta theory in order to dissolve the antagonism between the different epistemologies such as the subject-object issue.

His book has affected many scientists in the various fields.

And amazingly, they have rapidly developed new theories from a structural constructivist perspective only two years.

[Slide 5]

This slide shows the influence of the Structural Constructivism, and the development of the various fields of science, such as Nursing Sciences, Medicine, Qualitative Approach, and Statistics, and so on.

At this moment, someone may be thinking about a new theory according to the concept of the Structural Constructivism.

[Slide 6]

The Structural Constructivism consists of three major core concepts.

First is the concept of Prof. Ikeda's Structuralist philosophy of science and structuralist biology.

Prof. Ikeda pointed out that science doesn't need the reality of the world, and science is an

attempt to pursue the identity.

I will explain the meanings of these words after a while.

Second is the concept of the later-half Husserlian Phenomenology by Prof. Takeda.

Dr. Saijyo uses the modern meaning of the Transcendental Phenomenology as principles of thinking, and use the concept of Interest-Correlativity as one of core concepts of the Structural Constructivism.

Final one is the Saussure's Theory of General Linguistics such as Social Construction of Parole, and Individual Structure of Langue as well as Arbitrariness and structure of langue.

[Slide 7]

This slide shows the conceptual framework of the structural-constructivism.

The Structural-constructivism consists of two major structures.

That is, as shown in the slide, one is philosophical structure, and another one is scientific structure.

By the time limitation, I cannot explain all concepts of them completely.

This time, therefore, I will try to describe only a few core concepts.

That is, Interest-Correlativity, and, Structuralist Philosophy of Science, and also, Succession, and Generalization based on Analogy, in brief.

[Slide 8]

First of all, we should consider the reality of the scientific objects.

Usually the reality of the objects in the external world must be evident presumably.

But we don't need this assumption for scientific study.

We should think that the reality of this world is non-self-evident as Prof. Ikeda pointed out.

However, Phenomenon, appears before us, is real and undoubted.

Things in the external world can be reached easily to the common understanding, and then we tend to enhance thinking of the existence as real things.

Reversely, things in the mind must be difficult to reach to the common understanding.

Thus, the difference between the internal world and the external world must depend only on the degree of common understanding.

[Slide 9]

Prof. Ikeda suggested that the assumption of the external world is unnecessary for science.

At least, the reality of the external world is non-self-evident.

He also defined that science is an attempt to explain phenomenon with words and their relationship.

The phenomenon is variant, but the words and relationship are invariant.

Hence, we can say that science is an attempt to decipher the variant in terms of the invariant.

Alternatively, science is a game to decipher what is visible in terms of what is invisible.

If the word and formalism that construct scientific theories do not really exist in the external world, they must reflect patterns of human cognition and thinking.

That means, there can be many different scientific theories proposed for the same phenomenon.

The usefulness and value of the scientific theory depends on the degree of fitness to the phenomenon in question, rather than the ultimate truthfulness or correctness of the theory.

[Slide 10]

This slide shows “Interest-Correlativity” as a main core concept of the structural constructivism.

Prof. Takeda suggested that the existence, meaning, and value of the phenomenon depend on our own body, desire, interest, and purpose.

Dr. Saijyo use this concept into his theory, that is the structural-constructivism as a core concept.

Therefore, his theory can avoid the relativism.

[Slide 11]

For our studies, according to the concept of Interest-Correlativity, we decide or select “Research Question, Phenomenon of Interest, and Purpose of the Study”.

Moreover, we can interpret the Results of the study, and also generalize the Results,

And finally we could make some scientific theory according to the concept of Interest-Correlativity.

[Slide 12]

About the interpretation of the results, especially the generalization of the results, Yin indicated the different use of the words such as Statistical Generalization and Analytical Generalization.

Statistical Generalization is used for the results of Quantitative Study.

We usually estimate some population parameters such as mean value, correlation coefficient and so on.

And frequently we try to use the statistical hypothesis tests.

These procedures are the methods to get information about population from small samples.

However, for Qualitative Study, instead of statistical methods, we can use the Analytical Generalization.

That is the method of the Generalization and Development of our own Theories.

Dr. Saijyo proposed the concepts of Succession and Analogy for the generalization of the study results that depend on the Interest-Correlativity of researchers.

[Slide 13]

Succession and Analogy are core concepts of the structural-constructivism.

We can generalize the study results according to the interest-correlativity of the researchers.

We can use and interpret the results of patients with diabetes mellitus to other patients with other chronic disease.

If there is some substantive theory you are interested in, you may be extended to a formal theory by your study on the other conditions and informants.

If you cannot make a complete formal theory, you may be able to develop that theory to some extent.

[Slide 14]

After that, according to the concept of interest-correlativity,

Objectivist says:

A scientific knowledge is constructed by researcher.

You have a great insight.

You are right too.

And social-constructionist says:

A scientist constructs structures that explain our phenomena in an orderly.

Your thoughts are practical.

You are right too.

We can avoid an unnecessary struggle.

[Slide 15]

From a phenomenological perspective, phenomena of the internal and external worlds cannot be distinct.

From a structuralist philosophy of science, science is an attempt to make a model to describe the phenomenon of interest.

The value of the theory depends on the degree of fitness to the phenomenon of interest.

Study method should be selected by the researcher's interest-correlativity.

Generalization and interpretation of the results depend on the researcher's interest-correlativity.

Finally, from these points of view, there is no difference between qualitative and quantitative methods.

[Slide 16]

I really appreciate Dr. Takeo Saijyo (Research Fellow, Japan Society for the Promotion of Science, Waseda University) for his helpful suggestions and his useful slides about Structural-Constructivism, and also Prof. Kiyohiko Ikeda (Waseda University) for his relevant advice on Structuralist Philosophy of Science.

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I hope many researchers are interested in the structural-constructivism by Dr. Saijyo.

And if possible, his book should be translated into English.

Thank you very much.