

A Philosophy of Philosophy

Author: Weihan Huang

Master of Computer Science Department, State University of New York, at Buffalo, U.S.A.

Master of Physics Department, National Hsing Hua University, Taiwan

Email :weihanh@yahoo.com.tw

DOI: 10.26821/IJSRC.9.12.2021.91211

ABSTRACT

This paper investigates how philosophy can achieve meta-ability. The relationship of languages and thoughts is given. Then we define the order of terms in logic language, and show that all objects to be investigated are treated as first order terms, even for non-existence object or predicates in higher order logic are all rigidified as first order terms. By this rigidification and the naming mechanism of natural languages, meta-ability is achieved. And hence that philosophy is the meta-theory of branches of knowledge is shown. Lastly, I list 6 theories of philosophy of science to demonstrate the revision of philosophical theories of their naming, "Science".

Keywords: language, meta, philosophy

1. WHAT IS PHILOSOPHY ?

To understand philosophy is a theory of philosophy of philosophy. If philosophy is the meta-theory of every branch of knowledge, then it depends on how we define the term "meta". And the philosophy of philosophy should give mechanism of how philosophy has the meta-ability. i.e. What is "meta-ability" and how does philosophy achieve it? So philosophy of philosophy is basically studying the meta-ability by its own meta-ability.

2. LANGUAGE AND THOUGHT

Thoughts are represented by languages. For example, this article itself is a thought, written by natural language, investigating thought of thought. And it is self-apparent when you read this sentence here, thoughts are flowing to your mind by reading this natural language sentence here. Moreover, the language flow in consciousness is the owner of the mind. The existence of one's thought is the existence of one's being. Quoting Descartes' sentence "I think, therefore I exist". The limits of language are the limits of thoughts. It is the ability of the expression and common semantic commitment of languages to achieve communication of thoughts between human beings. And it is the ability of creation, interpretation and imagination of languages to make new thoughts. Languages are not only the prison of our minds, but also the liberation of our souls!

3. RIGIDIFICATION OF HIGH ORDER LOGIC

Definition of first order logic:

The language of first order logic contains quantifiers, predicates, logic operators, and first order terms. Quantifiers are like for-all and Exists.

Predicates are like $\text{IsAncestor}(X,Y)$, $\text{IsParent}(X,Y)$. Logical operators are {And, Or, Not, \rightarrow }. First order terms contain variables, objects and functions. Objects are like John, Mary. Functions are like $\text{fatherOf}(X)$. $\text{motherOf}(Y)$. The example of "Ancestor" can be written by the first order logic:

For-all X, Y,

$\text{IsParent}(X,Y) \rightarrow \text{IsAncestor}(X,Y)$

For-all X, Y, Z

$(\text{IsParent}(X,Y) \text{ and } \text{IsAncestor}(Y,Z))$

$\rightarrow \text{IsAncestor}(X,Z)$

For-all X $\text{IsParent}(\text{father}(X),X)$.

For-all X $\text{IsParent}(\text{mother}(X),X)$.

i.e. first order terms are inside predicates. And first order logic is by quantifying over first order terms. Higher order logic is by quantifying over predicates.

First order logic is well studied. For higher order logic, it is too powerful to compute. Quantifying over predicates meaning to search all sub-sets of sets, the computational complexity is over human being's ability. So always treat them as first order terms in the current theory, and explore the properties of the terms, and these properties are also of first order terms. And then construct the philosophical theory by giving relationships of these first order terms.

In addition to first order logic, without using higher order logic, we have category theory [1] for typed language, and un-typed lambda calculus theory [2] for un-typed language.

The meta-ability of philosophy requires higher order logic, i.e. studying property of property, thought of thought. We can rigidify the higher order terms to be first order terms. Then we can use first order logic and category theory to deal with them within a suitable time of reasoning.

4. "NAMING" AS AN IMPORTANT APPROACH TO META-ABILITY IN PHILOSOPHY

An object, whether it is an observable object, or a theoretical term, or an imaginary non-existent object, or a sentence, or a branch of knowledge, can be pulled out and be put in a node as a subject to study. This process is what I call the "naming". i.e. Give a name to refer to the node as a subject to study, no matter this name previously existed or it is a new name. Naming, in other words, is a mechanism to make a reference in natural language to the node under study.

The node, disregarding its previous logical status, is now treated as an object or a function in first order term in first order logic. i.e. "Naming" can be done in any higher order logics. This is called the rigidification of high order logic. And these are just what the above section talks about. This is not only for our cognitive simplicity, but also to study the node in a new altitude, possibly making a new theory or a new thought.

For any object, we pull it out and study it, this is an approach to the meta-ability in philosophy. When the subject name is "Science", we get "Philosophy of Science". And when the subject name is philosophy, we get "Philosophy of

Philosophy", it is just what this article talks about. For Philosophy of Science, I list 6 revision theories in the next section for the Naming mechanism of "Science". So that philosophy is the meta-theory of branches of knowledge is shown in this example.

After the Naming process, we can start to explore the properties of the subject node. And then we can study the sentence, relationship and functions among the subject node and other objects. And lastly the set of {naming, properties, functions} forms a new philosophical theory or a new philosophical thought.

5. REVISION OF THEORIES IN PHILOSOPHY OF SCIENCE WITH THEIR SUBJECT NAME "SCIENCE"

5.1 Logical Positivism [3]

A sentence makes sense if and only if it is analytical or it is empirically justifiable.

5.2. Logical Empiricism [4]

A sentence cannot be justified by empirical statistics of the justification.

5.3 Popper's Falsifiability of Scientific Theory [5]

A theory is scientific if it predicts something that is falsifiable.

5.4 Kuhn's Paradigm Shift of Scientific Revolution [6]

A paradigm shift is a fundamental change in the basic concepts and experimental practices of a scientific discipline.

5.5 Lakatos' Research Program [7]

The model of scientific development is the differences between several research

programs which are constructed by a hard core and a protective belt.

5.6 Feyerabend's Anarchy [8]

An anarchistic view of science rejects the existence of universal methodological rules.

6. CONCLUSION

It is important to note the relationship of language and thoughts. Firstly thoughts are represented by languages. Secondly the "Naming" mechanism in natural language and the rigidification in logic give the meta-ability of philosophy. This makes clearer of what philosophy is, and how philosophy works. Hence in addition to the example of the meta-theory of branches of knowledge "philosophy of science" shown above, philosophy of philosophy studies the meta-ability by its own meta-ability in this article.

7. REFERENCES

[1] Category theory

https://en.wikipedia.org/wiki/Category_theory

[2] Untyped Lambda Calculus

https://en.wikipedia.org/wiki/Lambda_calculus

[3] Logical Positivism 1920

https://en.wikipedia.org/wiki/Logical_positivism

[4] Logical Empiricism 1920

https://en.wikipedia.org/wiki/Logical_positivism#Empiricism

[5] Popper's Falsifiability of Scientific Theory 1934

<https://en.wikipedia.org/wiki/Falsifiability>

[6] Kuhn's Paradigm Shift of Scientific Revolution

1962

https://en.wikipedia.org/wiki/Paradigm_shift

[7] Lakatos' Research Program 1980

https://en.wikipedia.org/wiki/Research_program

[8] Feyerabend's Anarchy 1993

https://en.wikipedia.org/wiki/Paul_Feyerabend

*i*Journals