# Chapter 8.2
# Towards the New Episteme:
## Philosophy, Knowledge Science, Knowledge and Tacit Knowledge

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## ABSTRACT

The usual horizon of knowledge science is limited to nominalism, empiricism, and naturalistic and evolutionary epistemologies. I propose to broaden this horizon by applying some other philosophical attitudes, such as a non-nominalistic philosophy of language. A basic methodology for the new episteme, including (non-nominalistic) typology and a definition of knowledge and of tacit knowledge, is proposed. Several types of knowledge and the corresponding tacit knowledge are discussed within a broadened philosophical context. There are many types of knowledge and tacit knowledge using different methods of sharing. The main problem with the effective sharing of tacit knowledge is sharing knowledge *relevant* to the given problem. The transfer, change and transformation of tacit knowledge into explicit knowledge are possible. An example of such a transition, which I call *conceptualization*, is described. Conceptualization exemplifies *how* new knowledge can be created with the use of tacit knowledge. A need also exists for a professional collaboration between knowledge science, knowledge management and philosophy.

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## INTRODUCTION

This article is divided into two parts. In the first part, I discuss some general connections between knowledge science and philosophy, cf. section

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1. In the next sections, I present a philosophical and methodological discussion of the definitions of knowledge and tacit knowledge together with their possible classification. The minimal set of conditions which are necessary for an adequate grasp of the phenomena of knowledge and tacit knowledge is presented. Also, the conversion mechanism of tacit knowledge into explicit knowledge is described. The different types of knowledge with the corresponding kinds of the relevant tacit knowledge are given.

## Part I: On the Possible Impact of Philosophy on Knowledge Science and Systems Methodology

Very important properties of the approach proposed by Knowledge Science (KS) as well as by Systems Thinking (ST) are methodological pluralism and perspective shifting, for instance Wierzbicki and Nakamori (2006, ch. 6) or Houghton(2008). KS and ST contain some purely philosophical considerations. For instance, on the JAIST website of KS, philosophy is mentioned as a part of the scientific base of KS. L. Houghton also starts with a philosophical definition of epistemology. On the website of KS, some questions are also listed, as the most important for KS, for instance, "what is knowledge?" and "how can knowledge be created?", which are exactly the same questions that are basic to epistemology, for instance, the definition of epistemology on the Wikipedia[1] (to avoid more professional, and spurious at the moment, explanations). KS and ST are comparatively young scientific disciplines. On the other hand, philosophy and epistemology are more than 2000 year old. Also, the best scientists usually were philosophers or were well informed regarding some philosophical problems.

As a philosopher, I would like to indicate that postulates of ST and KS of methodological pluralism, variegation, perspective shifting etc., or Creative Holism, are mostly only *verbal*, because a great variety of philosophical possibilities are not at all taken into consideration by KS- and ST-scientists, and both KS and ST are based on a very narrow and discerned special approach to epistemological and ontological problems. The horizon of this narrow approach is limited by nominalism in the philosophy of language, materialistic monism in ontology, and empiricism, naturalistic and evolutionary epistemologies. Other possibilities are almost unseen. Also, from the viewpoint of pure philosophy, modernism and post-modernism are only very special and very limited philosophical attitudes. Strictly speaking, they are rather some "philosophical fashions", popular in the public at large, and ideologies which are very easy to understand by non-philosophers.

As an example of the consequences of this situation, I present, in the next sections, a philosophical analysis of knowledge and tacit knowledge which is based on a non-nominalistic philosophy of language.

Many kinds of nominalism[2] exist. However, we can define nominalism as a philosophy of language which denies the existence of abstract objects, and which accepts only the existence of different linguistic forms which are some real physical objects. Avoiding a long philosophical explanation, I would like to indicate that nominalism was rejected in an exact way in the philosophy of mathematics. Therefore, there are at least some examples of languages in which it is *not* possible to eliminate the acceptance of some abstract objects.

For example, there was a philosophical debate between L. Henkin (a nominalist) and W.V.O. Quine (a Platonist). As a result of this discussion, we have the so-called Henkin's models and Henkin's method in logic and model theory, i.e. theories based on the finding of some interpretations of the given formal language in this language. Henkin tried to demonstrate that "language speaks only about itself" and that there are *not* two sides of language: expressions and abstract meanings. He was wrong (cf. Quine, 1947, 1951; Henkin, 1953). It appeared that the diagonal argument of Cantor is based on a kind of (unavoidable) anti-

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