

# Tacit Knowledge/Knowing and the Problem of Articulation

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**ABSTRACT** Key words: strong thesis of tacit knowledge, weak theses of tacit knowledge, Wittgensteinian tradition, Polanyian tradition, Chinese philosophy

*In this paper, I attempt to create a dialogue between the Wittgensteinian tradition and the Polanyian tradition concerning the understanding of the concept of tacit knowledge/knowing from the perspective of the problem of articulation. Norwegian philosopher Harald Grimen argues for a distinction between the strong thesis of tacit knowledge and the weaker theses of tacit knowledge. The former highlights the logical gap between our knowledge and our capacity for verbal articulation, which is not the case for the weaker theses. Inspired by this important distinction, I claim that there are actually two meanings of Polanyi's concept of tacit knowledge/knowing. Finally, I try to bring out the relevance of the ongoing discussion on tacit knowledge/knowing to contemporary Chinese philosophy.*

The term “tacit knowing” or “tacit knowledge” was first introduced into philosophy by Michael Polanyi in 1958 in his *magnum opus Personal Knowledge*. Since then, different philosophical traditions—among them are the phenomenological, the hermeneutical, the Wittgensteinian and the Polanyian traditions—have carried on a discussion about this notion and related issues, producing along the way a great deal of literature. It is no exaggeration to talk about an ongoing discourse on tacit knowledge. The notion of “tacit knowledge” or “tacit knowing” is rich in its philosophical implications and has many theoretical dimensions. As indicated by the word “tacit,” the *prima facie* approach to this multifaceted discourse is that of the philosophy of language. Therefore, it is my goal in this paper to analyze “the problem of articulation,” and by means of discussion, I hope to clarify the meaning of the term “tacit knowledge/knowing.”

## 1. Tacit knowledge: the strong and the weak interpretations

By the problem of articulation, I mean the problem of the articulation of knowledge. According to Michael Polanyi, the theory of tacit knowledge stands in opposition to the “ideal of wholly explicit knowledge” which took shape from the scientific revolution of the seventeenth century. From Galileo’s famous saying “The book of Nature is written in mathematical language,” to Leibniz’s dream of universal language, to the logical positivists’ view of knowledge, we can see clearly the development of this ideal. Among them, logical positivism serves as a paradigm case. Kjell S. Johannessen, a Norwegian philosopher who works in the Wittgensteinian tradition, points out that, within the framework of logical positivism,

[K]nowledge and language are woven together in an indissoluble bond. The requirement that knowledge should have a linguistic articulation becomes an unconditional demand. The possibility of possessing knowledge that cannot be wholly articulated by linguistic means emerges, against such a background, as completely unintelligible.<sup>2</sup>

However, this doctrine of logical positivism has been called into question by philosophers from different traditions since the World War II.

It has in fact been recognized in various camps that *propositional* knowledge, i.e., knowledge expressible by some kind of linguistic means in a propositional form, is not the only type of knowledge that is scientifically relevant. Some have, therefore, even if somewhat reluctantly, accepted that it might be legitimate to talk about knowledge also in cases where it is not possible to articulate it in full measure by proper linguistic means.<sup>3</sup>

Johannessen, using Polanyi's terminology, calls the kind of knowledge that can not be fully articulated by verbal means, "tacit knowledge."<sup>4</sup>

As mentioned above, plenty of literature has been produced around the term, "tacit knowledge." Consequently, it is quite natural that people have different understandings of this notion. Harald Grimen, another Norwegian Wittgensteinian, claims that there are at least four possible interpretations of what "tacit knowledge" is.<sup>5</sup>

The first interpretation can be called the thesis of conscious under-articulation. In this view, tacit knowledge is something that we consciously attempt to conceal, to avoid articulating or to under-articulate. For instance, in marriage or political compromise, it is wise for the partners not to tell all they know about each other. This conscious under-articulation helps maintain a good relationship in marriage or political compromise, which might collapse because of over articulation. In a sense, this un-articulation or under-articulation of what one knows is tacit, because nobody talks about it. This interpretation of tacit knowledge might be interesting sociologically, but is not quite relevant epistemologically.

The second is the Gestalt thesis of tacit knowledge. When one is engaged in a certain activity, like playing piano, riding a bicycle, swimming, etc., one has to rely on a certain unproblematic background; otherwise the activity cannot be fluently carried on. If a person focuses on the background and tries to articulate it by linguistic means, the person will obstruct the performance of the activity. That is to say, the unarticulated background that is necessary for the performance of a certain activity cannot be articulated by the agent himself in the process of performance. The knowledge that the agent has about this unproblematic background is a kind of tacit knowledge. It is worth mentioning that this interpretation of tacit knowledge only claims that for the sake of not obstructing the performance of an activity, the agent cannot articulate verbally the background on which he relies. It does not assert that this kind of knowledge is unarticulatable in principle. What the agent can not articulate linguistically in the process of performance of the activity, can, Grimen thinks, be articulated by others or by himself after the performance. In Grimen's view, this interpretation of tacit knowledge is clearly influenced by Gestalt psychology, so he calls it the "Gestalt thesis of tacit knowledge." He claims that Polanyi's thinking is close to the Gestalt thesis.

The third interpretation can be characterized as "the thesis of epistemic regionalism." All the knowledge that one has, constitutes a vast, loosely knit and non-perspicuous system. At any given moment, one can only reflect on small parts of this knowledge system and verbally articulate them. No one can articulate the whole system simultaneously. In the sense of having a perspicuous overview and articulating by verbal means the knowledge that we have, we are all regionalists. To put it in another way, at any given time, we always have certain verbally unarticulated knowledge in our thinking and action, i.e., tacit knowledge. Grimen calls this interpretation of tacit knowledge "the thesis of epistemic regionalism." According to this interpretation, no specific elements of knowledge are in principle unarticulatable, but at a given moment, the knowledge that we can verbally articulate is limited. We cannot verbally articulate all that we know. There is no unifying perspective

from which we can verbally articulate at the same time all the knowledge that we possess.

The fourth interpretation is the strongest, and Grimen calls it “the strong thesis of tacit knowledge.” From this perspective, there are specific kinds of knowledge that are in principle verbally unarticulatable, which means that there exists a logical gap between our capacity of cognition, experience and action, on the one hand, and our capacity for verbal articulation, on the other. This knowledge that is in principle unarticulatable is tacit knowledge. Grimen claims that this interpretation of tacit knowledge is more radical than the Gestalt thesis of tacit knowledge and the thesis of epistemic regionalism because neither claims that there are specific kinds of knowledge that are in principle unarticulatable. This is the reason Grimen names this interpretation “the strong thesis of tacit knowledge,” on the one hand, while “the thesis of conscious under-articulation,” “the Gestalt thesis of tacit knowledge,” and “the thesis of epistemic regionalism” are the weaker theses, on the other hand. Grimen believes that tacit knowledge in the strong sense does exist. For example, the knowledge of sense qualities, the knowledge of the identity of a gestalt, and the knowledge of the choreography of an action are all difficult to articulate adequately by verbal means. To talk about tacit knowledge under these circumstances, doesn’t mean that language is unnecessary in these cases, but that language is not sufficient for obtaining and transferring such knowledge. Grimen maintains that for the aforementioned three cases, if the knower is short of first hand experiences and relies solely on verbal descriptions, he cannot acquire the knowledge in question. In a word, this interpretation of tacit knowledge brings out the logical gap between knowledge and language and affirms the existence of certain kinds of knowledge that cannot be articulated adequately by verbal means. Grimen claims that the strong thesis of tacit knowledge is more connected to the Wittgensteinian tradition and he doubts whether Polanyi supports this position. He prefers to discuss tacit knowledge from the perspective of the strong thesis. Similarly, Johannessen also emphasizes that when we say that tacit knowledge is something that is not possible to articulate adequately by linguistic means, we mean this “not possible” in a logical sense.

Influenced by the ideal of wholly explicit knowledge, people might say that the experience that can hardly be fully articulated by verbal means should not be called “knowledge,” but it should be called “intuition.” However, Grimen refuses to adopt this ambiguous and mysterious term to describe this kind of epistemic phenomenon. He thinks that we have good reasons to call it “knowledge.” First, the strong thesis of tacit knowledge doesn’t claim that tacit knowledge is completely unarticulatable. What is absolutely unarticulatable doesn’t make much sense in epistemology. All knowledge can be articulated, but not all knowledge can be articulated verbally. According to Grimen’s terminology, the concept of articulation covers more than the concept of language. Besides verbal articulation, we have other modes of articulation, such as, for instance, action. Grimen holds that as far as the articulation of knowledge is concerned, action as a mode of articulation is as fundamental as language. Tacit knowledge cannot be fully articulated by verbal means, but can be articulated in action. The theory of tacit knowledge will enhance our theoretical sensitivity to non-verbal modes of articulation. Thus, the strong thesis of tacit knowledge is not concerned with the distinction between what is articulatable and what is unarticulatable, but with the distinction between verbal articulation and non-verbal articulation. Mystical intuition is normally deemed unarticulatable in principle, and therefore has to do with the first distinction. In contrast to mystical intuition, tacit knowledge is articulatable, for Grimen, but it cannot be articulated by verbal means. Instead, it is open to non-verbal modes of articulation.

Further, Grimen points out that tacit knowledge can also be learned, transferred, accumulated and criticized. Of course, the modes of learning, transferring, accumulating and criticizing tacit knowledge are different from those of verbally articulated knowledge. For example, we can simply resort to words and statements so as to transfer verbally articulated knowledge. The transference of tacit knowledge relies more on

first-hand experiences and guided instructions of a master. Again, to criticize verbally articulated knowledge, we can examine the statements of knowledge, but in order to criticize tacit knowledge, we must appeal to action or practice.

To summarize, although the modes of articulating, learning, accumulating and criticizing tacit knowledge are different from those of verbally articulated knowledge, tacit knowledge and verbally articulated knowledge share many features: they are both able to be articulated, learned, transferred and criticized. Thus, although knowledge may be tacit in the sense that it cannot be adequately articulated by verbal means, it still is a member of the family of knowledge, and not something else. We can legitimately call it tacit knowledge.

## **2. The tacit root of human knowledge**

Grimen's clarification of the meaning of the term tacit knowledge is clear and insightful. However, his characterization of Polanyi's position is arguable. As mentioned above, Grimen thinks that Polanyi's understanding of tacit knowledge is close to the Gestalt thesis and Grimen is skeptical about whether Polanyi will support the strong thesis of tacit knowledge. In my view, this characterization does not accurately represent Polanyi's real position. The term tacit knowledge has two different but closely related meanings to Polanyi, which correspond respectively to the Gestalt thesis and the strong thesis of tacit knowledge. In other words, the Gestalt thesis of tacit knowledge and the strong thesis of tacit knowledge co-exist in Polanyi's philosophy. Moreover, it is worth noting that Polanyi's version of the strong thesis is much stronger and more radical than that of Grimen and Johannessen. According to Polanyi, not only is there knowledge that cannot be adequately articulated by verbal means, but also all knowledge is rooted in tacit knowledge in the strong sense of that term.

It might be helpful to take a look at the terminologies of Grimen and Polanyi before we go into the substance of the issue. Although Polanyi thinks that his understanding of words like "articulate" and "articulation" is wider than their common usage, his usage is still narrow compared to that of Grimen. In common usage, these terms refer to the actual enunciation of the sounds of language. In Polanyi, these terms are almost equivalent to the concept of language. Moreover, he proposes a wide understanding of language, which includes various symbolic forms such as written words, mathematical formulae, maps and diagrams. In other words, to Polanyi, articulation means verbal articulation, while to Grimen, articulation covers not only verbal articulation but also non-verbal modes of articulation. Grimen's understanding of articulation is wider than Polanyi's.

Polanyi says: "[H]uman knowledge is of two kinds. What is usually described as knowledge, as set out in written words or maps, or mathematical formulae, is only one kind of knowledge; while unformulated knowledge, such as we have of something we are in the act of doing, is another form of knowledge."<sup>6</sup> The first kind of knowledge is called explicit knowledge, also articulate knowledge, and the second is called tacit knowledge, also inarticulate knowledge. In a world where the ideal of wholly explicit knowledge prevails, knowledge is normally understood as something articulated by verbal symbols. However, tacit knowledge does not take verbal forms; it is a kind of knowledge that we have when we are in the act of doing something. To use the Wittgensteinians' terminology, it is a kind of action-inherent knowledge or action-constitutive knowledge. It is not difficult to detect that Polanyi's distinction between tacit knowledge and explicit knowledge is similar to Gilbert Ryle's distinction between "knowing how" to do something and "knowing that" something is the case.<sup>7</sup> As a kind of action-inherent knowledge or action-constitutive knowledge, tacit knowledge is tantamount to Ryle's "know how." It refers to a person's ability, capacity, competence and faculty in knowing and action. Therefore, on many occasions, it seems quite natural for Polanyi to substitute tacit powers for tacit knowledge.

Tacit powers have many manifestations. Some of them are more intellectual, such as knowing how to recognize somebody's physiognomy; some are more practical, such as knowing how to ride a bicycle. The former belongs to what Grimen regards as the tacit knowledge of gestalt identity while the latter belongs to the tacit knowledge of the choreography of an action. The developed form of the former is connoisseurship while that of the latter is skill. Theoretically, these two forms of tacit knowledge can be differentiated, but they are interwoven in real, concrete knowing processes: "The facts of biology and medicine, for example, can be recognized as a rule only by experts possessing both special skill for examining the objects in question and a special connoisseurship for identifying particular specimens" (*SM*, 23). Connoisseurship and skill are the indispensable elements of the art of knowing. Great scientific discoveries are the result of the performance of great scientists' art of knowing.

An important issue is whether it is the case that tacit knowledge in this sense cannot in principle be articulated by verbal means. Both psychological experiments about the development of human intelligence and the history of evolution show, Polanyi implies, that human intelligence is not markedly different from that of animals before human beings grasp language. However, after a person grasps language, human intelligence develops rapidly and leaves animals far behind. The watershed, as it were, between human intelligence and that of animals lies in the acquisition of language. The human intellectual superiority over animals depends on the use of language. To some, this fact favors the ideal of wholly explicit knowledge, but Polanyi does not think so. He argues that the human ability to know has a biological origin and is continuous with animals' inarticulate intelligence. He further traces tacit powers back to the activities of protozoa or even ultramicroscopic, virus-like specks of living matter. The emergence of language boosts human tacit powers, but it does not change their tacit character.

While language expands human intelligence immensely beyond the purely tacit domain, the logic of language itself—the way language is used—remains tacit.<sup>8</sup>

Maps, graphs, books, formulae, etc., offer wonderful opportunities for reorganizing our knowledge from ever new points of view. And this reorganization is itself, as a rule, a tacit performance, similar to that by which we gain intellectual control over our surroundings at the pre-verbal level, and akin therefore also to the process of creative reorganization by which new discoveries are made (*SM*, 24-25).

Polanyi claims that linguistic symbols serve human beings as a tool to know the world: "Our whole articulate equipment turns out to be merely a tool-box, a supremely effective instrument for deploying our inarticulate faculties" (*SM*, 25). In line with this instrumental understanding of language, tacit powers necessarily lie outside of the articulate framework.

Even if we admitted that an exact knowledge of the universe is our supreme mental possession, it would still follow that man's most distinguished act of thought consists in *producing* such knowledge; the human mind is at its greatest when it brings hitherto uncharted domains under its control. Such operations renew the existing articulate framework. Hence they cannot be performed within this framework but have to rely (to this extent) on the kind of plunging reorientation which we share with the animals. Fundamental novelty can be discovered only by the same tacit powers which rats use in learning a maze (*SM*, 18).

Therefore, although human intellectual superiority over animals lies in human use of linguistic symbols, this

utilization itself is a tacit process and “can be done only in our heads and not by operating with signs on paper”(SM, 25). The ability to renew an articulate framework lies beyond the articulate framework; the use of linguistic symbols cannot be exhausted by linguistic symbols. Thus, to fully grasp human cognitive powers, “articulation always remains incomplete” (PK, 70).

In a word, by emphasizing the biological origin of man’s cognitive faculty and the instrumental value of language, Polanyi shows that human beings have certain cognitive powers, which, in principle, can not be exhausted by linguistic means, and he calls them tacit powers. This is the first meaning of Polanyi’s concept of tacit knowledge. With this, we have good reason to say that, in Polanyi, there is a strong thesis of tacit knowledge in Grimen and Johannessen’s sense.

Furthermore, in contrast to Grimen and Johannessen, who argue for the importance of tacit knowledge by juxtaposing tacit knowledge with verbally articulated knowledge, Polanyi makes a stronger claim. He argues that tacit knowledge in this strong sense is the foundation of all explicit knowledge. All explicit knowledge has a tacit root. Tacit powers are the ultimate faculty through which humans acquire and hold knowledge. As mentioned above, the utilization of linguistic symbols itself is a tacit performance. Specifically, this utilization has at least two processes, namely, giving meaning to and understanding the linguistic symbols, without which, explicit knowledge cannot be realized. Polanyi holds that these two processes are all tacit. On the one hand, “nothing that is said, written or printed, can ever mean anything in itself: for it is only a *person* who utters something—or who listens to it or reads it—who can mean something *by* it. All these semantic functions are the tacit operations of a person.” (SM, 22). The meanings of all symbols are given by the tacit performance of the knower. If their tacit coefficients are abolished, all written words, formulae, and graphs will be meaningless. On the other hand, the realization of explicit knowledge depends on our understanding of linguistic symbols, and “the understanding of words and other symbols is also a tacit process.” (SM, 21) Mathematical formulae, written words and graphs can convey various kinds of information, but they cannot convey the understanding of this information: “Only by virtue of this act of comprehension, of this tacit contribution of his own, can the receiving person be said to acquire knowledge when he is presented with a statement” (SM, 22).

Polanyi concludes: “While tacit knowledge can be possessed by itself, explicit knowledge must rely on being tacitly understood and applied. Hence all knowledge is *either tacit or rooted in tacit knowledge*. A *wholly* explicit knowledge is unthinkable”(KB, 144). These words can be regarded as a paradigmatic expression of the primordially of the tacit dimension and as a rebuke of the absurdity of the ideal of wholly explicit knowledge. Considering the fact that the understanding of knowledge has been dominated by the ideal of wholly explicit knowledge since the seventeenth century, one can imagine how difficult it is to argue for the priority of the tacit dimension. As Professor Marjore Grene recalls, Polanyi spent an entire year on preparing for the manuscript of his chapter “Articulation” for *Personal Knowledge*, the theme of which is “ the grounding of articulation in the inarticulate.”<sup>9</sup>

Man’s tacit powers are not static. They are embodied in the dynamic process of knowing. In order to stress on the dynamic character of tacit knowledge, Polanyi tends to use the expression “tacit knowing”: “Knowledge is an activity which would be better described as a process of knowing.”(KB, 132) Inspired by Gestalt psychology, Polanyi describes the structure of tacit knowing. In this connection, we will try to clarify the second meaning of Polanyi’s concept of “tacit knowledge,” which is close to what Grimen calls the Gestalt thesis of tacit knowledge.

In order to describe the structure of tacit knowing, Polanyi developed a theory of two kinds of awareness, i.e., focal awareness and subsidiary awareness. For instance, in driving a nail with a hammer, we are both aware of the nail and aware of the hammer and the feelings in the palm, but in different manners. The object of attention is the nail, not the hammer and the feelings in the palm. Our awareness of the latter is not for itself, but for the former. Polanyi claims that our awareness of the nail is focal, while our awareness of the hammer and the feelings in the palm are subsidiary. Tacit knowledge is built on the dynamic relation between subsidiary awareness and focal awareness. In order to grasp an object, we must integrate all the relevant clues and particulars into a comprehensive entity. Here, the subsidiary awareness of various clues or particulars constitutes the first term of tacit knowing, while the focal awareness of the comprehensive entity is the second term. In order to know the latter, we have to rely on the former. The former is what we rely on, while the latter is what we attend to. Tacit knowing realizes itself in the dynamic process moving from the first term to the second term: “Tacit knowing is from-to knowing.”<sup>10</sup> The knower integrates the particulars into a focal object, and establishes a from-to dynamic relation between subsidiary awareness and focal awareness. This is the basic structure of tacit knowing.

In *The Tacit Dimension*, Polanyi discusses a psychological experiment on subception. In the experiment, a person was presented with a large number of nonsense syllables. After showing him some of these syllables, the experimenter administered an electric shock. Very soon, the person showed signs of anticipating the shock when he saw those “shock syllables.” Obviously, he knew how to anticipate the electric shock. However, when questioned, he could not specify what made him expect it. Polanyi thinks that the experiment on subception well illustrates the basic epistemological fact that “We know more than we can tell.” Polanyi points out that, in the experiment,

We know the electric shock, forming the second term, by attending to it, and hence the subject is *specifiably* known. But we know the shock-producing particulars only by relying on our own awareness of them for attending to something else, namely the electric shock, and hence our knowledge of them remains *tacit*.<sup>11</sup>

Here, Polanyi takes our knowing of the subsidiary term as tacit knowledge. In *PK*, he calls the knowledge of the particulars of the subsidiary term ineffable knowledge: “The knowledge of such particulars is therefore ineffable, and the pondering of a judgment in terms of such particulars is an ineffable process of thought” (*PK*, 88). Since in many cases the first term of tacit knowing is near to us while the second term is far from us, Polanyi, using the language of anatomy, calls the first term the proximal term and the second term the distal term. He says, “It is the proximal term, then, of which we have a knowledge that we may not be able to tell” (*TD*, 10). Here, we can detect a slight change in the meaning of Polanyi’s use of the term “tacit knowledge.” As mentioned above, the first meaning of Polanyi’s concept of tacit knowledge points to man’s ability, capacity, competence or faculty in knowing and action, which originated in animals’ inarticulate intelligence. But now, tacit knowledge refers to our knowledge of the particulars that constitute the comprehensive entity. This kind of knowledge is tacit in the sense that it is not specifiable. When he talks about tacit knowledge in this sense, Polanyi defines tacit knowledge in terms of the unspecifiability of subsidiaries.

Polanyi claims that there are two ways in which subsidiaries are unspecifiable: “We must distinguish, then, two types of unspecifiability of subsidiaries. One type is due to the difficulty of tracing the subsidiaries—a condition that is widespread but not universal; the other type is due to a sense deprivation which is *logically* necessary and in principle absolute” (*M*, 39).

The first type of unspecifiability of subsidiaries indicates that we are focally ignorant of the particulars of a comprehensive entity. Polanyi says:

It is not surprising, therefore, that we may often apprehend wholes without ever having focally attended to their particulars. In such cases we are actually ignorant, or perhaps more precisely speaking, *focally ignorant* of these particulars; we know them only subsidiarily in terms of what they jointly mean, but cannot tell what they are in themselves. Practical skills and practical experience contain much more information than people possessing this expert knowledge can ever tell. Particulars that are not known focally are unspecifiable, and there are vast domains of knowledge, relating to living things, the particulars of which are largely unspecifiable. The human physiognomy is one such thing (SM, 32-33).

In recognizing somebody's face, in riding a bicycle or in swimming, etc., we are only subsidiarily or instrumentally aware of the particulars, but focally ignorant of them. Thus, although we can quickly recognize somebody's face from a group of people and we can ride a bicycle and swim skillfully, we normally cannot identify the particulars of these comprehensive achievements (or entities). In this sense, these particulars are unspecifiable. About this type of unspecifiability, it is worth mentioning that although there are cases in everyday life and in scientific research where we cannot tell the particulars but know the comprehensive entity, such cases are widespread but not universal, according to Polanyi. For instance, in some cases, such as in topographic anatomy, even though we know quite well the particulars, but we find it difficult to grasp the relationship between them (PK, 88-89).

Polanyi names the second type of unspecifiability "logical unspecifiability." This has to do with the mutual exclusiveness of the two kinds of awareness: "Subsidiary awareness and focal awareness are mutually exclusive" (PK, 56). For instance, in playing the piano, the pianist focuses his attention on the piece of music that he is playing, and he is therefore only subsidiarily aware of the movements of his fingers. If he shifts his attention to his fingers, he gets interrupted and cannot go on with the music. Relying on his subsidiary awareness of his fingers, the pianist fluently plays the piece of music, but when he has a focal awareness of the fingers, his playing may well be interrupted (TD, 18ff). Polanyi thinks that in this case we also face the problem of unspecifiability of particulars, but not in the sense of being ignorant of the particulars. In this case, we can know clearly the particulars of the performance. Here, the unspecifiability of particulars lies in the fact that once we focus our attention on the particulars, our action will be obstructed or even destroyed. Thus, logical unspecifiability is a description of the function of subsidiaries: the function of particulars is to play the role of subsidiaries; once they become the object of focal awareness, the performance of the original activity cannot be carried on. Moreover, this type of unspecifiability holds only for the agent who is performing the action. It is not necessarily unspecifiable for an onlooker. Now it is clear that what Grimen means by the Gestalt thesis of tacit knowledge is exactly what Polanyi calls the logical unspecifiability of the particulars as subsidiaries. As mentioned in the last section, it is not the case that tacit knowledge in this sense cannot in principle be articulated by verbal means.

In a word, the second meaning of Polanyi's concept of tacit knowledge is the unspecifiability of subsidiaries. Polanyi considers the first type of unspecifiability the stronger one and the second type the weaker one: "the stronger one, due to our ignorance of the subsidiary particulars, and the weaker one, due to the purely functional meaning of such particulars" (SM, 45-46). We have seen that the weaker unspecifiability (logical

unspecifiability) applies only to the performing agent, but not necessarily to the observer. The stronger unspecifiability has to do with the difficulty of identifying the subsidiaries, but this difficulty is only a factual one, not a logical one. By switching the focus on those particulars, most of them become specifiable. Subliminal subsidiaries which seem impossible to be focused on by oneself can be rendered specifiable by somebody else, like a neurologist. Thus, both types of unspecifiabilities are not in principle unspecifiable; in other words, tacit knowledge in this sense, is not logically unarticulatable by verbal means.

So, there are two different meanings of the term “tacit knowledge” in Polanyi: one refers to man’s powers in knowing and action which originated from animals’ inarticulate intelligence, the other refers to man’s knowledge of subsidiary particulars in our from-to knowing. The former is in principle not possible to be exhausted by verbal means, but this is not case for the latter. Thus, Polanyi affirms both the strong thesis of tacit knowledge and the Gestalt thesis of tacit knowledge.

### 3. Conclusions and Comments

I conclude this paper with the following three points:

First, it is important for different philosophical traditions to communicate with each other on the problem of tacit knowledge. As mentioned above, there are basically four traditions involved in the present discourse about tacit knowledge. However, as far as I know, philosophers from these traditions don’t have a sufficient exchange of ideas. In this paper, my discussion touches upon two traditions, the Polanyian tradition and the Wittgensteinian tradition. On the one hand, Grimen, who works in the Wittgensteinian tradition, does not have a full and rich picture of Polanyi’s thinking. He sees the Gestalt thesis of tacit knowledge in Polanyi but loses sight of his strong thesis of tacit knowledge. On the other hand, because he does not sharply differentiate the strong thesis of tacit knowledge and the weaker theses, Polanyi himself does not thematize the difference between tacit knowledge in the sense of a kind of cognitive faculty originated from animals’ inarticulate intelligence and tacit knowledge in the sense of the unspecifiability of subsidiaries. Later Polanyians don’t consciously distinguish the two meanings of tacit knowledge either. A review of several important books on Polanyi in the English speaking world since the seventies<sup>12</sup> reveals that the authors basically understand Polanyi’s tacit knowledge in terms of its second meaning, that is, the unspecifiability of the subsidiaries. One possible exception is Drusilla Scott, in her *Everyman Revived: The Common Sense of Michael Polanyi*. She touches upon the first meaning of Polanyi’s concept of tacit knowledge.<sup>13</sup> However, she doesn’t make a clear distinction between the two meanings of Polanyi’s concept of tacit knowledge. Inspired by philosophers in the Wittgensteinian tradition who argue strongly for a distinction between the strong thesis of tacit knowledge and the weaker ones, I find that there are actually two meanings of Polanyi’s concept of tacit knowledge. In my view, the dialogue that I try to create in this paper is helpful both for overcoming the inaccuracy of Grimen’s reading of Polanyi, on the one hand, and for the clarification of the self-understanding of tacit knowledge in Polanyian tradition, on the other hand. In a word, for the sake of deepening the study of the theory of tacit knowledge, the communication between different traditions is absolutely necessary.

Second, the philosophical discourse about tacit knowledge is quite relevant to the development of contemporary Chinese philosophy. As a continuation and further development of the traditional philosophical debate on whether it is possible to grasp Tao<sup>14</sup>(metaphysical wisdom/Truth) by verbal means, an important aspect of modern Chinese philosophy, is the discussion of the problem of the relation between the expressible and the inexpressible.<sup>15</sup> The discussion presupposes the dichotomy between knowledge and metaphysical

wisdom/Truth. Modern Chinese philosophers tend to think that metaphysical wisdom/Truth cannot be said, while scientific knowledge or common sense can be said. Different from the modern Chinese discourse on the possibility of metaphysical wisdom/Truth, which tends to deal with the problem of the relationship between the expressible and the inexpressible on a metaphysical level, the theory of tacit knowledge examines knowledge on a non-metaphysical level. It attempts to show that there are tacit elements that can hardly be articulated by verbal means in our daily knowing activities and in scientific researches. Furthermore, it is worth noting that the modern Chinese discourse on the possibility of metaphysical wisdom/Truth is built on an ingrained doctrine, that is to say, philosophers are trapped by the ideal of wholly explicit knowledge and maintain that knowledge, in science and in daily life, can be exhausted by propositions. This doctrine is undermined by the theory of tacit knowledge, which claims that there are tacit coefficients, which cannot be exhausted by verbal means in daily knowing activities and in scientific researches. Thus the theory of tacit knowing/knowledge constitutes an inner critique of modern Chinese philosophy. In my view, by integrating the insights of the theory of tacit knowledge, we will overcome the unfounded and rigid dichotomy between knowledge and metaphysical wisdom/Truth, and will see clearly the continuity between them: not just metaphysical wisdom/Truth cannot be said; even in daily knowing activities and scientific researches, there are also unavoidable tacit elements. I am confident that the combination of the metaphysical approach and the non-metaphysical approach will enhance our understanding of the problem of articulation.

Finally, this discussion of the theory of tacit knowledge helps sensitize us to several distinctions concerning the problem of articulation of knowledge. In the first place, there is the distinction between what is articulatable and what is unarticulatable. As Grimen rightly points out, the theory of tacit knowledge has no interest in anything which is completely unarticulatable. The object domain of the theory of tacit knowledge is knowledge, and knowledge can always find a mode of articulation, though it may not be the mode of verbal articulation. Secondly, there is a distinction between what can in principle be articulated by verbal means and what cannot. This distinction is a bit complicated. It covers two finer sub-distinctions into which we might look carefully.

As mentioned above, modern Chinese philosophers hold that metaphysical wisdom/Truth cannot be said. This view has a long history in China and we can find its origin as early as in Laozi's *Dao De Jing* (approximately 571 B.C.—480 B.C.). The issue has been addressed again and again by later philosophers. The new contribution that modern Chinese philosophers make to the discussion lies in the fact that they, on the basis of rigorous logical analysis which they learn from their Western colleagues, define more clearly and accurately than ancient Chinese philosophers what they mean by “saying,” “language,” etc. They make it clear that the meaning of the claim that metaphysical wisdom/Truth cannot be said is that it cannot be articulated in propositions, which are mainly defined as descriptions of facts as with early Wittgenstein. In this sense, it is not the case that metaphysical wisdom/Truth cannot be said at all. For language cannot be reduced to a sum of propositions. There are other ways of saying besides descriptive propositions. For instance, poetic expressions (cf. Feng Youlan, 1894-1990) and metaphysical statements (cf. Jin Yuelin, 1895-1984) are two modes of non-propositional or even trans-propositional expressions that are recommended by modern Chinese philosophers to capture metaphysical wisdom/Truth. However, it is worth noting that, poetic expressions and metaphysical statements are trans-propositional expressions, although, they are not trans-verbal expressions. They are still two kinds of verbal expressions. They are within the limit of verbal articulation. It is exactly this limit that the theory of tacit knowledge attempts to transgress. Tacit knowledge in the strong sense is something that not only cannot be exhausted by propositions, but also cannot be exhausted by verbal means. It can only be articulated non-verbally, like an action. In other words, the modern Chinese discussion about the problem of the relationship

between the expressible and the inexpressible is carried out within the domain of verbal articulation, in which the distinction between propositional expression and non-propositional expression plays a central role. The theory of tacit knowledge, especially the strong thesis of tacit knowledge, however, is concerned about the distinction between verbal articulation and non-verbal articulation.

In the first section, we have the distinction between the strong thesis of tacit knowledge and the weaker ones. The strong thesis emphasizes the logical gap between our knowledge and verbal articulation. That is, tacit knowledge is a kind of knowledge that cannot be adequately articulated verbally. The weaker theses of tacit knowledge, including the thesis of conscious under-articulation, the Gestalt thesis of tacit knowledge, and the thesis of epistemic regionalism, do not affirm anything like a logical gap between our knowledge and verbal articulation. Tacit knowledge in the weaker sense is only knowledge that is not articulated by verbal means. It is not knowledge that in principle cannot be verbally articulated.

In other words, the strong thesis of tacit knowledge is concerned about the distinction between what is in principle verbally articulatable and what is not, while the weaker theses are concerned about what is verbally articulated and what is not in the domain of knowledge which is in principle verbally articulatable. In summary, the theory of tacit knowledge has no interest in the distinction between the articulatable and the unarticulatable. The strong thesis of tacit knowledge is concerned about the distinction between what is in principle verbally articulatable and what is not. The weaker theses are concerned about the distinction between what is verbally articulated and what is not, in the domain of knowledge which is in principle verbally articulatable. The Chinese discourse about metaphysical wisdom/Truth is concerned about the distinction between the propositional and the non-propositional within verbal articulation. In a word, on the problem of articulation, at least the aforementioned four distinctions should be taken into consideration. The theory of tacit knowledge strongly enhances our theoretical sensitivity towards these distinctions.

## Endnotes

<sup>1</sup> Michael Polanyi: *Personal Knowledge—Towards a Post-Critical Philosophy* (London: Routledge, 1958): 264. Citations hereafter are in parentheses by title abbreviation (*PK*) and page number.

<sup>2</sup> Kjell S. Jonhassen: “Rule Following, Intransitive Understanding, and Tacit Knowledge”, in *Essays in Pragmatic Philosophy*, II, Norwegian University Press, 1990, pp. 104-5.

<sup>3</sup> *Ibid.*, p.105.

<sup>4</sup> *Ibid.*, p.105.

<sup>5</sup> Harald Grimen “Taus Kunnskap og organisasjonsstudier” (“Tacit Knowledge and the Study of Organization,” LOS-Center, working paper, Bergen, 1991. This text is in Norwegian in the original. The English translation was first prepared by Bjoern Wikner, then improved by Judith Lasen and finally approved by Harald Grimen. This working paper is available from the author of this essay (email: Harald.Grimen@adm.hio.no). My discussion below uses some quotations from Grimen’s paper; when this is the case, the context identifies Grimen as the author.

<sup>6</sup> Michael Polanyi: *The Study of Man*, (Chicago: University of Chicago Press. 1959), p.12. Citations hereafter are in parentheses by title abbreviation (*SM*) and page number.

<sup>7</sup> Gilbert Ryle, “Knowing How and Knowing That”, in *Proceedings of the Aristotelian Society*, Vol.46. 1946, pp.1-16.

<sup>8</sup> Michael Polanyi: *Knowing and Being, Essays by Michael Polanyi* (London: Routledge. 1969), p. 145. Citations hereafter are in parentheses by title abbreviation (*KB*) and page number.

<sup>9</sup> Marjorie Grene: “Tacit knowing: Grounds for a revolution in philosophy”, *Journal of the British Society for Phenomenology*, Vol. 8, No. 3, October 1977, p.168.

<sup>10</sup>Michael Poalnyi and Harry Prosch, *Meaning*, The University of Chicago Press, 1975, p.34. Citations hereafter are in parentheses by title abbreviation (*M*) and page number.

<sup>11</sup> Michael Polanyi: *The Tacit Dimension*, (Garden City, NY: Doubleday: 1966) pp. 9-10. Citations hereafter are in parentheses by title abbreviation (*TD*) and page number.

<sup>12</sup> Cf. Recharad Gelwick: *The Way of Discovery—An Introduction to the Thought of Michael Polanyi*, Oxford University Press, 1977; Harry Prosch: *Michael Polanyi—A Critical Exposition*, State University of New York Press, 1986; Richard Allen: *Polanyi*, The Claridge Press, 1990; Jerry H. Gill: *The Tacit Mode: Michael Polanyi’s Postmodern Philosophy*, State University of New York Press, 2000; Tchafu Mwamba: *Michael Polanyi’s Philosophy of Science*, The Edwin Mellen Press, 2001. Stepania Ruzsits Jha: *Reconsidering Michael Polanyi’s Philosophy*. University of Pittsburgh Press, 2002.

<sup>13</sup> Cf. Drusilla Scott: *Everyman Revived: The Common Sense of Michael Polanyi*, William B. Eerdmans Pulibshing Companyi, 1995, pp.45-61 . The first edition of this book was published by The Book Guild Limited in 1985.

<sup>14</sup> The notion of “Tao” is not limited to Taoism. It was shared by different schools of thought in ancient China. It is rich in its connotations; here I focus on one of them, that is, metaphysical wisdom/truth.

<sup>15</sup> Cf. YU Zhenhua: *How is Metaphysical Truth Possible?*. East China Normal University Press, 2000. Also, “How to say what can not be said?”, working paper, SVT (The Center for the Study of the Natural Sciences and the Humanities, University of Bergen), 1996, and its Chinese version in *Philosophical Researches*, no. 6, 1996; “A Critique of Modern Chinese Metaphyscis”, *Academic Monthly*, No. 9, 2002.

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Articles, meeting notices and notes likely to be of interest to persons interested in the thought of Michael Polanyi are welcomed. Review suggestions and book reviews should be sent to Walter Gulick (see addresses listed below). Manuscripts, notices and notes should be sent to Phil Mullins. Manuscripts should be double-spaced type with notes at the end; writers are encouraged to employ simple citations within the text when possible. MLA or APA style are preferred; because the journal serves English writers across the world, we do not require anybody's "standard English." Abbreviate frequently cited book titles, particularly books by Polanyi (e.g., *Personal Knowledge* becomes *PK*). Shorter articles (10-15 pages) are preferred, although longer manuscripts (20-24 pages) will be considered. Consistency and clear writing are expected.

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