

Buddhism and Buddhology from the Viewpoint of Yoga Practice and Practical Theory 瑜伽修行與實踐理論視角的佛教與佛學[§]

Hidenori SAKUMA
佐久間秀範*

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* Professor, Faculty of Humanities and Social Sciences, University of Tsukuba, Japan.
日本筑波大學大學院人文社會系教授。

Abstract

There is a difference between Buddhism as a religion and Buddhology as a field of scholarship regarding the way in which they think of Buddhism. Buddhology gives precedence to the accurate interpretation of texts on the basis of philological investigations, and by tracing currents of thought as they have undergone changes over time and across regions it has shown how Buddhist thought has changed, thereby making it possible to read Buddhist scriptures accurately without being influenced by beliefs and preconceptions. At the same time, although Buddhism is grounded in the experiences of practitioners, Buddhology has tended to be overly cautious about introducing into textual interpretation data about what is actually experienced by people today in the course of their Buddhist practices on the grounds that such data lack objectivity. Consequently Buddhology has also been reluctant to utilize the findings of neuroscience and other branches of the natural sciences that have been engaged in collecting data about the experiences of practitioners. This article represents an attempt to explore how Buddhology as a field of scholarship might be able to collaborate with the natural sciences and utilize its findings.

摘要

宗教意義上的佛教與學術意義上的佛教（即佛學）是不同的。在佛學領域中，依據文獻研究的文本精確闡釋享有優先地位；追跡時空遞嬗下的思潮，揭示了佛學思想的流變，從而可能正確的研讀佛典，不致於受到個人信仰與先入之見的影響。同時，佛教是以修行人的體驗為基礎，佛學研究則認為，今日佛教修行人的真切修習體驗缺乏客觀性，因而憚於用在文本的解讀上，導致佛學研究也一直不願利用那些蒐集修行者體驗資料的神經科學與其他自然科學的研究發現。本文探討作為一種學術研究領域的佛學研究，如何而可與自然科學研究互相切磋，並運用自然科學的研究成果。

Introduction

Present-day Buddhology is founded on the methods of scholarship developed in Europe. Its starting point was first establishing primary texts by editing the manuscripts of Buddhist works recorded in various Asian languages and then interpreting their content as accurately as possible. As a result, it became possible to carefully scrutinize and examine interpretations of Buddhism that had been coloured by personal beliefs and regional customs and to understand in a universally applicable manner Buddhist thought at the time when the texts were recorded. By objectifying Buddhist thought, which had until then been believed in and understood on a personal level, these fruits of Buddhology provided a benchmark for ascertaining one's own position and confirming that one's ideas about Buddhism as seen from one's own perspective had not lapsed into self-complacency, and they also played an important role in ascertaining whether or not one's understanding of Buddhism had become one-sided within the traditions of Buddhism as transmitted from the distant past and in giving one confidence about the validity of one's understanding.

In the following, I accordingly would like to consider not only what sort of message Buddhism has for us today in a passive sense, but whether Buddhism can be actively utilized in our present-day lives.

Buddhism and Buddhology

First, what is Buddhism? It is of course based on the teachings of the historical Buddha. According to biographies of the Buddha, Gautama Siddhārtha became the Buddha as the result of his ascetic and other practices. It is at least a

fact that Siddhārtha was a yoga practitioner or *yogin*. This means that Buddhism is based on the practice of yoga.

What, then, is Buddhology? It is basically founded on the study of texts that record the teachings and thought of the Buddha, his disciples, and later Buddhists. In the course of their dissemination the content of the teachings was recorded in languages underpinned by various cultures, and in this sense diverse theories were produced not only on the basis of the views of the individuals who disseminated the teachings but also on the basis of a variety of historical and cultural backgrounds. Careful philological research is an extremely important element of Buddhology. Consequently Buddhist scholars have been engaged in collecting and analyzing all manners of extant information about Buddhism, including documentary records, manuscripts, and inscriptions. But the actual practice of yoga and the existence of practitioners, overshadowed by these meticulous philological methods, have tended to be disregarded and in some cases ignored as not being worthy of consideration.

In such circumstances, how have the Yogācāra school of Mahāyāna Buddhism and its theory of consciousness-only (*viññaptimātra-vāda*) been treated?

As is suggested by its name, the Yogācāra school was a group of yoga practitioners. Therefore, the texts of this school were presumably recorded on the basis of the first-hand experiences of practitioners who actually engaged in the practice of yoga. This means that in research on the texts of this school it is important to give consideration to experiences gained in the course of yoga practice.

Assuming that the texts of the Yogācāra school were composed on the basis of the actual experiences of practitioners, let us imagine the process whereby they were composed. It is to be surmised that accounts of the experiences of meditation and other practices handed down by many practitioners (*yogācārin*)

over the course of many years eventually accumulated, and their essence having been extracted, they were gradually organized as certain theories. Because these theories had practical implications, I refer to them as “practical theories.” In works of the early Yogācāra school, such as the *Yogācārabhūmi* and *Mahāyānasūtrālamkāra*, it is possible to gain a sense of such practitioners and their experiences. Such a trend can also be discerned from the *Madhyāntavibhāga* to the *Mahāyānasamgraha* and then down to the time of the *Viṃśikā Vijñaptimātratā-siddhi* and *Triṃśikā Vijñaptimātratā-siddhi*, which may be considered to mark the culmination of the practical theories. Thereafter the treatment of theories underwent a gradual change, which occurred because as these practical theories became firmly established, more organized, and then systemized, they became divorced from actual practitioners and gradually turned into a purely theoretical system. Since these theories were organized as doctrines free from an inconsistencies, I refer to them as “doctrinal theories.”

The Understanding of the Cognized World in the Consciousness-Only Thought of the Yogācāra School

Scholars refer to the theories of the Yogācāra school as the theory of consciousness-only. This is because this school maintains that the phenomenal world is constituted only of mind. Furthermore, in a general common-sense understanding the phenomenal world refers to the entire world that we normally perceive. But this is not the same as the world understood from the perspective of a yoga practitioner. Why is it that the theory of consciousness-only, based on the practice of yoga, has been misunderstood in India and also in China and Japan as a form of thought that is called idealism in Western philosophical traditions?

One reason is that in the *Mahāyānasamgraha* (MS II.7.) it is argued that the “three realms,” or in modern parlance the “phenomenal world,” are no more than

a manifestation of the mind. That is to say, the notion of “consciousness-only” was deemed to derive from the statement in the *Daśabhūmika* of the *Avataṃsaka-sūtra* that “the three realms are only a manifestation of the mind,”¹ and the *Samdhinirmocana-sūtra* (SNS VIII.7.) was also quoted to bolster the validity of this assertion.

What are the “three realms”? They refer to three levels of *samsāra*, or the world of delusion as experienced by the ordinary person, namely, the realms of desire, form, and non-form. In other words, the term “three realms” gives expression to the phenomenal world before our eyes as seen through three levels of the mind.

- Realm of desire (kāma-dhātu): the world seen through the filter of an individual’s value judgements
- Realm of form (rūpa-dhātu): a state in which one has complete control of one’s value judgements and sees the world solely in terms of the interaction of mind and objects (This state can be inferred to some degree by ordinary people too.)
- Realm of non-form (ārūpya-dhātu): a state transcending the level of interaction between mind and objects, in which the mind alone is operating (This presumably reflects the experiential knowledge of practitioners adept in yoga and is difficult for ordinary people to infer.)

The Chinese equivalent of “consciousness-only” is *weishi* 唯識, but Chinese *shi* 識 was used to translate both *vijñāna* (consciousness, cognition)

1 DBhS (Rahder, 49.10; Kondō, 98.8): *cittamātram idaṃ yad idaṃ traidhātukam/*

This sentence appears in a passage that explains the twelve limbs of dependent co-arising as manifestations of *citta*, and it is immediately followed by the following sentences: *yāny apīmāni dvādaśa-bhavāṅgāni tathāgatena prabhedaśo vyākhyātāni tāny api sarvāny ekacitta-samāśritāni/ tat kasya hetoḥ/ yasmim vastuni rāgasamyuktaṃ cittam utpadyate tad vijñānam/ vastu saṃskāraḥ/* (Kondō edition).

and *vijñapti* (representation). Unfortunately these two terms were not differentiated in China, and they became indistinguishable.

- According to the *Viṃśikā*, the terms *citta*, *manas*, *vijñāna*, and *vijñapti* are all synonyms. This represents an everyday understanding in which these terms all refer to mental functions.
- In the *Triṃśikā*, *citta* is equated with *ālayavijñāna*, *manas* with *kliṣṭa-manas*, and *vijñāna* with the six *vijñānas* (consciousnesses). This is regarded as the basis of consciousness-only thought. As for the question of why this schema differs from the *Viṃśikā*, it is to be supposed that the *Triṃśikā* was written for practitioners and is therefore based on experiences had by practitioners as they minutely observed their states of mind during yoga meditation, whereas the *Viṃśikā* was written not for practitioners but for ordinary people and so is written at the level of everyday understanding.

Taking the above into account, let us now consider once again how to understand the statement that “the three realms are only a manifestation of the mind.” *Citta* (mind) in this quotation from the *Daśabhūmika* of the *Avatamsaka-sūtra*, cited in the *Mahāyānasamgraha* as evidence originating in the Buddha’s teaching, basically signifies everyday “cognition,” and *citta*, *manas*, and *vijñāna* are used interchangeably to signify “mind.” Since the time of Early Buddhism it was thought that the phenomenal world is grasped by the sense organ *manas*, which synthesizes information from the five sense organs (eyes, ears, nose, tongue, and body). What, then, is this *manas* as the sixth sense organ? In modern terms, it is probably close to what we refer to as the “brain.”

At this point I would like to provide some brief explanations of a number of technical terms. *Ālayavijñāna* (store consciousness) signifies the cognitive activity that stores all information, and it is the most basic source from which all cognized worlds arise. *Kliṣṭa-manas* (defiled mind) signifies contaminated

cognitive activity, that is, the cognitive activity that mistakes *ālayavijñāna*, the source of the cognized world, as the self that lies at the centre of cognition of the phenomenal world. *Vastu* signifies a “thing” divorced from verbal expression, something beyond the phenomenal world that we cognize by means of everyday verbal concepts. Since it is something that cannot be expressed by language, I shall refer to it as “someThing.”² Lastly, *tathatā* means “thusness,” or things as they are, i.e., “someThing” as it is.

If we now describe the phenomenal world by means of these technical terms, it can be said that “someThing” (*vastu*) perceived by the five sense organs and *manas* is different from the phenomenal world that we normally perceive. That is to say, the object of *manovijñāna* (thinking consciousness) that is processed by the sense organ *manas* (not by the *manas* [mentation] of *citta-mano-vijñāna*) is in reality nothing more than the phenomenal world that we believe we are actually seeing through the workings of the brain, and it is not necessarily the same as the object *qua* “someThing” itself. This means that it is an image created by the brain. I would like to illustrate this with the example of how we perceive male and female cabbage butterflies.

Humans are unable to perceive any difference between male and female cabbage butterflies. However, it is known that when viewed through the eyes of a cabbage butterfly, males and females clearly differ in colour. When ultraviolet rays strike their wings, the wings of the female look white and those of the male look black. It is thought that because ultraviolet rays are invisible to humans, we are unable to differentiate between the two, but cabbage butterflies are able to see ultraviolet rays and so can distinguish between males and females by their

2 To the best of my understanding, the Kantian concept of *Ding an sich* as an object of cognition is related to the “intelligible world” (die intelligible Welt), and as such it is to be understood within the confines of thought, that is, by means of verbal concepts. In contrast, the Buddhist term *vastu*, and by extension *tathatā*, designate a realm that transcends human thought, verbal concepts having been completely eradicated through the practice of yoga. Since this realm is devoid of verbal concepts, properly speaking it cannot be expressed verbally, but verbal expression needs to be used in order to communicate it to others, and for this reason I have coined the term “someThing.” “SomeThing” thus differs in meaning from Kant’s *Ding an sich*.

differences in colour. It is further thought that whereas this is an important factor for cabbage butterflies to ensure that they leave offspring, it is not important for humans, and this difference manifests in a difference in perception. This example is proof that human cognition is influenced by the needs of humans and that we are not seeing “someThing” as it is.

The images created by our brains differ from “someThing” as it is. It is to be surmised, in other words, that yoga practitioners knew from experience that the phenomenal world pictured by the mind is a fabrication and different from things as they are. In the Yogācāra school *citta-mano-vijñāna*, which makes us misperceive reality, is described as *parikalpa* or *abhūta-parikalpa*, usually translated as “false discrimination.”

The Structure of Cognition as Shown in Yogācāra Texts

Next, I would like to cite some passages that show that yoga practitioners experienced in the course of meditation, each in accordance with his level of practice, “someThing” as it is which transcends the cognitive activities of *citta-mano-vijñāna*.

Jñānālokālaṃkāra §34³ may be summarized as follows: in the awakened state (bodhi), the mind (*citta-mano-vijñāna*) does not function when there is neither arising nor ceasing, nor when there is any false discrimination (*parikalpa*)

3 JAA §34, 65.2ff.: *anupādānirodhe Mañjuśrīś citta-mano-vijñānaṃ na pravartate/ tatra na kaścit parikalpah/ ... / yac cāvidyāyā asamuthānaṃ tad dvādaśānāṃ bhavāṅgānāṃ asamuthānaṃ/ yad dvādaśānāṃ bhavāṅgānāṃ asamuthānaṃ sājātiḥ/ ... / yaḥ paramārthaḥ sa niḥpudgalārthaḥ/ yo niḥpudgalārthaḥ so 'nabhilāpyārthaḥ/ yaś cānabhilāpyārthaḥ sa pratīyasamutpādārthaḥ/ yaḥ pratīyasamutpādārthaḥ sa dharmārthaḥ/ yo dharmārthaḥ sa tathāgatārthaḥ/ tenocyate/ yaḥ pratīyasamutpādaṃ paśyati sa dharmāṃ paśyati/ ...*

there, and by retracing the process of dependent co-arising⁴ it can be said to be something that has been verbally conceptualized (*abhilāpya*).

Here I would like to touch on that which is verbally conceptualized (*abhilāpya*) and the act of verbal conceptualization (*abhilāpa*). A major characteristic of human beings is their ability to abstract from objects of cognition, that is, the ability to conceptualize and verbalize “someThing.” The term *vikalpa* or *parikalpa* refers to the act of cognitive discrimination, and if to conceptualize by means of such cognitive activity corresponds to verbalization

4 The process of retracing the twelve limbs of dependent co-arising refers to the process whereby all suffering in the form of old age, death, and so on arises from the ignorance or nescience that mistakes “someThing” as it is for reality, a process that is here explained as a mental process. If one realizes that the phenomenal world, which we believe to be reality, is in fact a fabricated world, then, just as if the scales had fallen from one’s eyes, it becomes possible to escape the spiral of evil in the form of transmigration. In epistemological terms, the process of retracing the twelve limbs of dependent co-arising can be explained in the following manner.

(1) nescience (*avidyā*): ignorance of the fact that the phenomenal world we perceive is not things as they really are, but is perceived only once incoming information about it has been processed by the brain.

(2) formative forces (*samskāra*): for example, when the intent to drink water arises from memories and other accumulated latent impressions (information, etc.), there is formed “someThing” (*vastu*) synthesized by that intent, and an image of drinking water is created. “Formative forces” may be understood as this series of subconscious intentions.

(3) consciousness (*vijñāna*): the act of judging through the filter of our value judgements that an image born of our intentions is such-and-such.

(4) name-and-form (*nāma-rūpa*): the act of forming a judgement about something entails assigning it a name or designation and positing a form corresponding to its name. When forming a judgement, the seer (name) or grasper is simultaneously manifested with the seen (form) or grasped.

(5) six sense fields (*ṣaḍāyatana*): there are posited the grasper (five sense organs and the mind or brain) and the grasped (objects of the five sense organs and information [*dharma*]).

(6) contact (*sparśa*): a relationship is formed between the six sense organs and their objects.

(7) sensation (*vedanā*): when a relationship is formed between a sense organ and an object, there arise agreeable or disagreeable sensations.

(8) craving (*trṣṇā*): depending on the sensation, one desires what is agreeable and eschews what is disagreeable.

(9) attachment (*upādāna*): one then becomes attached to what is agreeable and seeks to reject what is disagreeable.

(10) existence (*bhava*): as a result of attachment to the fabricated world created by nescience, there begins the spiral of evil (transmigration) in which one is caught up in a maelstrom of inescapable desires, just like a money-mad person who continues to pursue money even though he is aware of the pitfalls of the bubble economy.

(11) birth (*jāti*): birth into the world of the deluded.

(12) old age and death (*jarāmaraṇa*): fearful of growing old and dying, one continues to experience futile suffering.

(*abhilāpa*), then this means that “nothing but someThing” (*vastumātra*) manifests itself anew before our eyes as the cognitive world, which has been conceptualized and verbalized (*abhilāpya*). Naturally there is a gap between “someThing” (*vastu*) and that which is verbally conceptualized (*abhilāpya*), and therefore the latter is described as “false” (*abhūta*). We experience on a daily basis how, once “someThing” has been conceptualized, the concept expands in diverse ways. This is called *prapañca*, or “conceptual elaboration”⁵.

Jñānālokālamkāra §24 describes awakening (*bodhi*) in the following manner:⁶

Mañjuśrī, awakening is that in which the three circles⁷ have been completely cut off. What is the complete cutting off of the three circles? It means that the mind does not abide, does not ideate, does not discriminate, does not conceptually elaborate on that which is presently arising.

Jñānālokālamkāra §16 describes as follows how the phenomenal world of the ordinary person appears from the vantage point of the state of awakening:⁸

In the same way, *Mañjuśrī*, all phenomena are the same, free from discrimination and free from distinctions. Why is that? Because no phenomena are apprehended.

5 Sakurabe (1975, 114) supports the translation “diversifying” used by Nyānamoli and Norman.

6 JAA §24, 56.15ff.: *bodhir Mañjuśrīr ... trimaṇḍalaparicchinnā/ tatra katamo Mañjuśrīs trimaṇḍalaparicchedah/ ... sa cittamanovijñānāpratiṣṭhito na kalpayati na vikalpayati/ ... pratyutpannaṃ na prapañcavati/*.

7 This presumably refers to *tri-maṇḍala-pariśuddhi*, i.e., the notion that the giver of a donation, the recipient, and that which is given are empty and thus pure.

8 JAA §16, 48.10ff.: *evam eva Mañjuśrīḥ samāḥ sarvadharmāḥ nirvikalpā nirviśeṣāḥ .../ tat kasmād dhetoḥ/ anupalabdhitvāt sarvadharmāṇām/*.

Next, *Jñānālokālamkāra* §17 discusses awakening and thusness in the following manner:⁹

That which is awakening is sameness; that which is sameness is thusness. All phenomena governed by thusness have a conditioned aspect and an unconditioned aspect. But that which is thusness is neither conditioned nor unconditioned nor are both provisionally established. Where there is neither conditioned nor unconditioned nor the provisional establishment of both, that is thusness.

Our cognitive activities perceive a world that has been provisionally established by verbal concepts such as “conditioned” and “unconditioned,” and because they are mediated by verbal concepts underpinned by the cultural background of individuals or society there are individual differences in perceptions of the world. In other words, sameness (*samatā*) is not maintained.

In *Samḍhinirmocana-sūtra* 1.2 the fact that conceptualization and verbalization constitute the phenomenal world is explained in brief in the following manner.¹⁰ The conditioned and the unconditioned are no more than verbal expressions in the ordinary world (**vyavahārābhilāpa*) that are born of the

9 JAA §17, 50.8ff.: *yā bodhiḥ sā samatā/ yā samatā sā tathatā/ tathatā-pratiṣṭhitāś ca sarvadharmāḥ saṃskṛtā asaṃskṛtāś ca/ yā ca tathatā na tatra saṃskṛtaṃ nāsaṃskṛtaṃ na dvayaprajñaptiḥ/ yatra na saṃskṛtaṃ nāsaṃskṛtaṃ na dvayaprajñaptiḥ sā tathatā/*

10 SNS 1.2, 35.11ff.: *rīgs kyi bu 'dus byas zhes kyang de ni ston pas (*śāstr) btags pa'i tshig (*aupacārikapada) yin te/ ston pas btags pa'i tshig gang yin pa de ni/ kun tu rtog pa (*parikalpa) las byung ba tha snyad du brjod pa yin la/ kun tu rtog pa las byung ba tha snyad du brjod pa (*vyavahārābhilāpa) gang yin pa de ni/ kun tu rtog pa sna tshogs kyi tha snyad du brjod pa gtan yongs su ma grub pa'i phyir (*atyanta-apariniṣpannatvāt) 'dus byas ma yin no// rīgs kyi bu 'dus ma byas zhes bya ba de 'ang tha snyad kyi khongs su gtogs pa yin la/ 'dus byas dang 'dus ma byas su ma gtogs pa gang ci brjod kyang de 'ang de dang 'dra ba nyid du gyur/ de 'ang de dang 'dra ba nyid du 'gyur ro// brjod pa (*abhilāpa) ni dngos po (*vastu) med pa can yang ma yin te/ dngos po de 'ang gang zhe na/ 'phags pa rnam kyis 'phags pa'i shes pa (*ārya-jñāna) dang/ 'phags pa'i mthong bas (*ārya-darśana) brjod du med par mngon par rdzogs par sangs rgyas pa (*abhisambuddha) gang yin pa ste/ brjod du med pa'i chos nyid (*anābhilāpya-dharmatā) de nyid mngon par rdsogs par rtogs par bya ba 'i phyir 'dus byas zhes ming du btags so/*

discriminative function (*parikalpa). But this does not mean that a verbal expression (*abhilāpa) is not accompanied by “someThing” (*vastu). Sages realize correctly that “someThing” cannot be verbalized (or conceptualized). But in order to make ordinary people realize this reality that cannot be verbalized (*anabhilāpya-dharmatā) sages provisionally establish designations such as “conditioned” and so on.

In connection with the verbalization of that which cannot be verbalized for the benefit of ordinary people, the “Tattvārtha” chapter of the *Bodhisattvabhūmi*¹¹ states in brief that if there were a “someThing” that had a certain function corresponding to its verbal expression, there would be several “own-natures” corresponding to one “someThing.” There is thus no fixed relationship between verbal expression and “someThing.”

Further, in the commentary on *Mahāyānasūtrālamkāra* 1.1¹² it is stated in brief as follows: By what is the teaching caused? It is caused by pure language. Where there is no language, the elucidation of meaning is impossible.

Returning to the “Tattvārtha” chapter of the *Bodhisattvabhūmi*,¹³ in response to the question of why verbal expression should be applied to phenomena that cannot be expressed by language, it is explained that it is because without verbal expression ineffable phenomena cannot be taught or expressed to others, nor can their ineffable true nature be understood. Thus,

11 BoBh (Tattvārtha: Takahashi) 5.2.1, 96.11ff.: *sacet punar yathaivābhilāpo yeṣu dharmeṣu yasmin vastuni pravartate tadātmakās te dharmās tad vastu syād evaṃ sati bahuvīdhā bahavaḥ svabhāvā ekasya dharmasyaikasya vastuno bhavyeḥ/ tat kasya hetoḥ/ tathā hy ekasmīn dharmā ekasmīn vastuni bahuvīdhā bahavo bahubhir abhilāpaiḥ prajñaptaya upacārāḥ kriyante// na ca bahuvīdhānām bahūnām prajñapti-vādānān niyamah kaścīd upalabhyate/.*

12 MSA, 1.9ff.: *kena vācā padaiḥ cāmalaiḥ/ amalaiḥ padair iti yuktaiḥ sahitair iti vistaraḥ/ na hi vinā vācā padavyañjanair artho vibhāvayitum śakyata iti/.*

13 BoBh (Tattvārtha: Takahashi) 7, 106.11ff.: *evaṃ nirabhilāpya-svabhāveṣu sarva-dharmeṣu kasmād abhilāpaḥ prayujyate// tathā hi vinābhilāpena sā nirabhilāpya-dharmatā pareṣāṃ vaktum api na śakyate śrotum api// vacane śravaṇe cāsati sā nirabhilāpya-svabhāvatā jñātum api na śakyate/ tasmād abhilāpaḥ prayujyate śravaṇa-jñānāya//.*

verbal expressions are applied to phenomena in order to understand them through verbal communication.

It is thus repeatedly stated in texts of the Yogācāra school that verbal expressions based on verbal concepts are unable to give expression to things as they are. This has since the time of Śākyamuni been the basic stance of Buddhism, a basic principle of which has been to “cut off the path of language,” and it was for this reason that when he gained enlightenment Śākyamuni wanted to enter *nirvāṇa* without teaching to others what he had understood. It was only because of Brahmā’s entreaty that he began to use verbal expression to preach to ordinary people. Practitioners of the Yogācāra school rediscovered this through their own experiences and repeatedly emphasized it, as we have seen in the above passages.

What is the problem with verbal expression? It is that interpretations of that which has been verbally expressed proliferate depending on the cultural background of individuals and society, and we recede ever further from things as they are. This is *prapañca*.

As is stated in the “Bodhipakṣa” chapter of the *Bodhisattvabhūmi*,¹⁴ when discrimination that falsely perceives diversified concepts born of verbal expression has been completely eliminated by bodhisattvas with their sacred knowledge, “someThing” that cannot be expressed verbally manifests itself in this state in which the “own-nature” of all verbal expression does not exist.

14 BoBh (Wogihara, 266.10ff.; Dutt, 181.10ff.): *yadā ca punar bodhisattvair jñānenāryeṇa te 'bhilāpa-samutthitā mithyā-samjñā-vikalpāḥ prapañca-samjñānugatāḥ sarveṇa sarvam apanītā bhavanti tadā teṣāṃ bodhisattvānāṃ paramāryāṇāṃ tenārya-jñānena tan nirabhilāpyam vastu sarvābhilāpya-svabhāvābhāva-mātram ākāśopamaṃ parīśuddhaṃ khyāti/*.

The Practice of Meditation and the Responses of the Brain

People today understand that the brain controls our everyday cognitive activity. Next, I would like to consider the functioning of Broca's area, a part of the brain responsible for processing language.

The circuit whereby the high-frequency alpha band emerges through breathing technique is connected as follows. When an individual continues to be in a state in which the left brain is not functioning through concentration on breathing, the working memory in the prefrontal cortex starts to function. This then activates serotonin in the brain stem, and once the serotonin pathway has been stimulated, signals are sent to the basal forebrain. The basal forebrain changes the state of the cerebral cortex and raises the high-frequency alpha band. During this state self-consciousness remains, but a state of non-thinking, namely, the repression of cognitive functions, evolves. This state decreases anxiety and stress and gives the individual a refreshed psychological state. This is a basic brain circuit relating to the breathing techniques of Zen meditation. (Arita 2008, 32)

The absence of functioning in Broca's area is necessary for the activation of serotonin (Arita 2008, 30).

Let us consider what this means in the context of Yogācāra thought. It is thought that we obtain information from the outside world through our five senses and grasp the outside world by processing this information by means of the sense organ *manas*, namely, the brain. The information conveyed to the brain not only comes from the five senses, but also arrives constantly from within the body (heart, fingernails, memories, etc.), and all this information is then said to accumulate in the insular cortex. Information from the right hemisphere gathers

in the left insular cortex and information from the left hemisphere gathers in the right insular cortex, and it appears that all information gathers to the right via the corpus callosum. It is said that when there is damage in the left insular cortex, self-consciousness is not lost, but when the right insular cortex is damaged, then the individual may lose self-cognition and may, for example, say while pointing to his own finger, “This is not my finger.” The deepest level of self-consciousness may reside here. There is a strong possibility that a very skilled practitioner experiences this.

Even if an individual is in a state such as that called *nirodhasamāpatti*, or “equipoise of cessation,” and has full control of the five senses and consciousness, internal information is continually being passed to the brain. Assuming that Broca’s area has stopped functioning, the individual can induce the high-frequency alpha band by means of serotonin but retains a wakened self-consciousness. The frontal cortex, which corresponds to the empathetic brain, is now activated. There is a possibility that the frontal cortex produces the ego vis-à-vis others (or “someThing”) in a way that is somehow related to self-consciousness. As a hypothesis, it is possible that the insular cortex is similar in function to *ālayavijñāna* and, supposing that this is misunderstood as the ego, that the frontal cortex is similar in function to *manas*. It is highly likely that practitioners experienced this.¹⁵

The use of the above sort of data in neuroscience, obtained from people in states of meditation, has gradually come to be accepted in the natural sciences. Regrettably it is still regarded as taboo in the field of Buddhology to conduct research on Buddhist texts while taking into account these scientific findings. But if Yogācāra thought represents a theoretical formulation based on the experiences of yoga practitioners, then the utilization of the findings of careful observations

15 On the actual positions of the insular cortex and frontal cortex, reference should be made to explanatory diagrams of the brain. See, e.g., the diagrams in Arita 2009.

of the human body and mind obtained in a different field of research ought to constitute an important element in the study of philosophical thought.

It can be surmised that whereas, as was noted earlier, the terms *citta*, *manas*, *vijñāna*, and *vijñapti* are treated as synonyms in the *Viṃśikā* because this text employs the traditional everyday understanding of the six consciousnesses, the schema in the *Triṃśikā*, equating *citta* with *ālayavijñāna*, *manas* with *kliṣṭa-manas*, and *vijñāna* with the six consciousnesses, gives expression to cognitive activity on the basis of experiences gained by practitioners as they minutely observed mental states during meditation. If this is so, how can we understand the above behaviour of the insular cortex as described in neuroscience?

It may be supposed that when their practice of meditation climaxed, practitioners of the Yogācāra school had an experience divorced from Broca's area which they experienced as a state in which verbal expression by means of verbal concepts had been eradicated, and they had a real sense of the manifestation of things as they are. In such a state they would also have sensed the activation of the functions of the prefrontal cortex. Because they would have gained a real sense of not only things as they are but also the true nature of self-consciousness, they may have sensed something corresponding to *ālayavijñāna* in the depths of their mind, and if they gained a sense of a self-consciousness at a deeper level than the ego-consciousness conceived of within the confines of the everyday six consciousnesses, then it would have been natural to posit some sort of mental function between *ālayavijñāna*, which operates even in states of unconsciousness such as *nirodhasamāpatti* (which cannot be explained by Abhidharma Buddhism), and the everyday six consciousnesses. It is to be surmised that then, taking the terms *citta*, *manas*, and *vijñāna* that had been ordinarily used to refer to "mind," first *citta* was equated with *ālayavijñāna* and *vijñāna* with the six consciousnesses, and then later in the *Viniścaya*, a newer section of the *Yogācārabhūmi*, and in the *Mahāyānasamgraha*, which systemized the theories of the Yogācāra school a little later still, *manas* was equated with

kliṣṭa-manas, and this schema then took root in subsequent Yogācāra thought and became established in the form seen above in the *Triṃśikā*.

By Way of Conclusion

In the above I have employed the methods of Buddhology, but the method of combining the perspective of yoga practitioners with the findings of neuroscience is still in its infancy. Therefore, rather than presenting any sort of conclusion, I would like to bring this essay to a close by describing on the basis of Yogācāra texts what sort of vista awaited the practitioner when he became a buddha, assuming that in Mahāyāna Buddhism the practitioner ought to aim to become a buddha. Buddha cognition (*jñāna*) is a way of seeing “someThing” as it is. From the fact that in a state such as *nirodhasamāpatti* the frontal cortex, or empathetic brain, becomes very active and incoming sensory information ceases to arrive from the six senses it may be readily supposed that a yoga practitioner was able to experience the direct intuition of an external “someThing” without the mediation of verbal concepts. When a yoga practitioner reached a higher level, the existential base supporting his mind changed and there arose for him a state of “seeing with wisdom.” In other words, a Buddha intuitively “someThing” directly as it is without any mental filters. This is described as follows in the *Śrāvakabhūmi*, the oldest section of the *Yogācārabhūmi*:

Because the base changes, [the yoga practitioner] goes beyond the image and there arises for him, with regard to “someThing” to be known, direct seeing with wisdom free from discrimination.¹⁶

16 Sakuma 1990, 8.12 (A.1.5): *āśrayaparivṛteś ca pratibimbam atikramya tasminn eva jñeye vastuni nirvikalpaṃ pratyakṣaṃ jñānadarśanam utpadyate/*; *ibid.*, 102.13ff. (A.1.5.): “und [daß] aufgrund der Umgestaltung (bzw. des veränderten Zustandes) der [Existenz]grundlage das [geistige] Abbild überstiegen wird und eine vorstellungsfreie, direkt wahrnehmende

Abbreviations

- BoBh (Dutt): See Dutt 1978.
BoBh (Tattvārtha: Takahashi): See Takahashi 2005.
BoBh (Wogihara): See Wogihara 1930-36.
DBhS (Kondō): See Kondō 1936.
DBhS (Rahder): See Rahder 1926.
JAA: See Kimura et al. 2004.
MS: See Lamotte 1973.
MSA: See Lévi 1911.
SNS: See Lamotte 1935.

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