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The Buddhist *Pramāṇa*-Epistemology, Logic, and Language: with Reference to Vasubandhu, Dignāga, and Dharmakīrti

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Abstract:
As the title of the present article shows, it highlights the three philosophically integrated areas – (1) *pramāṇa*-epistemology (theory of comprehensive knowledge involving both perception and inference), (2) logic (although a part of *pramāṇa*-epistemology, it has two modes, namely, inductive reasoning and deductive reasoning), and (3) language (or semantics, i.e. the double negation theory of meaning, which falls under inference). These are interconnected as well as overlapping within the Buddhist mainstream tradition of the process philosophy as opposed to the substantialist philosophy. The same is the case with the three celebrated Buddhist thinkers – Vasubandhu, Dignāga (also spelt as Diññāṇa), and Dharmakīrti – who develop their radical and critical views focusing on these areas in historical-cum-philosophical order. It is worth noting that within the same mainstream Buddhist tradition, each one of the three thinkers picks up the problematic issues from their predecessors – from the Buddha to their immediate predecessors respectively – for their solutions against the backdrop of the two conflicting mainstream traditions – Buddhist and non-Buddhist. The central focus of these thinkers is first to identify the crucial issues, doctrinal principles, terminology, and methodology in their own ways and conceptual frameworks, which generate not only the mutual conflicts in the course of dialogues but also strengthen their positions by means of their new radical ideas, innovations, terminologies, methodologies, and doctrinal principles. As a result, the three selected areas and their crucial issues are explained, elaborated, and interpretated for better understanding. All of which are rooted in the Buddha's path of wisdom, ethics, and liberation from the human predicament (*duḥkha-nivṛtti*). In this grand project of the deepest concerns, the Buddha utilized multiple strategies like understanding and controlling the problematic nature of the mind (Pali *citta*, *manasa*) and its concomitance (Pali *cetasika*, *dhammā*) by means of the concentrative meditation (Pali *jhāna*, Sanskrit (hereafter Skt., *dhyāna*), cultivation of knowledge (Pali *vijjā*, Skt. *vidyā*) and conduct/moral purity (Pali *caraṇa*, Skt. *ācaraṇa*), destruction of afflictions/defilements (Pali *kilesa*, Skt. *kleśa*), critical and logical thinking with valid arguments, and so on. His disciples also treat him as the possessor of valid method, arguments, meaning, practice, and purpose (Skt. *pramāṇabhūta*, the term used by Dignāga). He believed in the common humanity as the community of sufferers and the autonomy of every human being (Pali *attakāra*), but strongly

rejected the hierarchy of humanity on the basis of caste, birth, and dogmatic religious identity. For these reasons, following the Buddha and his celebrated followers like Vasubandhu, Dignāga, and Dharmakīrti, my task in this article is how to clearly and elaborately discuss the above identified issues and theories, first to understand them for myself and then logically prove the whole process of knowledge and the designed purpose through communication to those who have the intention to hear and understand the framework of common language for their benefits. I wish the readers like students and young teachers benefit from my research work. Further, since my learning of the Tibetan language is zero, but comfortable in Sanskrit and Pali, I have been heavily dependent on three great modern thinkers who have widely written independently and also translated the Buddhist Tibetan texts, which were translated from the original Sanskrit texts now lost, into English in the areas of Buddhist epistemology, logic, and semantics. These modern scholars are Masaaki Hattori, Shoryo Katsura, and Richard Hayes. Besides them, I have also little benefitted from some other scholars who have worked in the same areas.
Keywords: Scepticism, nominalism, phenomenalism, idealism, representationalism, naïve realism, critical and external realism, Sautrāntika, Yogācāra, pramāṇa, svalakṣaṇa, sāmānyalakṣṇaṇa, pratyakṣa, anumāna, svārthānumāna, parārthānumāna, anyāpoha, a-vinā-bhāva, vyāpti, svabhāvapratibandha, arthakriyā, tadutpatti, tādātmya, anutpatti.

Introductory Statement

A systematic epistemology, logic, and philosophy of language began a century or two before the common era, i. e. the Christian era, first by Gautama's Nyāya school of thought in the aphoristic style with four formal structural limbs or components – namely, valid cognition also called knowledge (*pramā*), object of knowledge (*prameya*), source of knowledge (*pramāṇa*), and resultant knowledge (*pramāṇaphala*). This gave rise to different theories of knowledge (*pramāṇavāda*) depending on the different conceptual and categorial frameworks of different Indian schools of philosophy, and different sets of the sources of knowledge (*pramāṇa*), four of which are prominent as propounded by the realist Nyāya system, such as, perception (*pratyakṣa*, i.e. direct knowledge), inference (*anumāna*, i.e. indirect knowledge but basically based on direct knowledge), comparison (*upamāna*), and trust-worthy word or testimony (*śabda*), each one of which passes through epistemological and logical processes, which involves direct cognitive experience, requisite factual conditions with ontological and causal relations, cognizer's past cognitive experiences, reason, evaluation, and judgment, etc. Nevertheless, there are many other schools like Mīmāṁsā and Vedānta, which have their own different additional sets of sources of knowledge. Despite these conflicting approaches, each *pramāṇa*-theory in general claims to serve human purpose of welfare (*lokakalyāṇa*), which in the Buddha's schema is rooted in two basic doctrines, namely, the Four Noble Truths and the Middle Path, following the *pramāṇa*-epistemology of truth and validity with discrimination between falsity and invalidity. So far as the Buddhist inferential logic (*anumāna*) is concerned, it tacitly follows the conceptual, ontological, and categorial framework of the realist Nyāya system, a staunch opponent of Buddhism, which is considered strategically useful for conventional purposes in Buddhist logic.

However, in another way, despite traditional opposition and divide between the Vedic–Upaniṣadic and other Brāhmaṇic systems on the one hand and on the other, the Śramaṇic traditions (Jainism, Buddhism, and Cārvāka), which do not accept the authority of the Vedas, there is another type of philosophical divide on the line of 'essentialism and substantialism (*ātmavāda*)' and 'non-essentialism and non-substantialism (*anātmavāda*).' Similarly, there is still another type of distinction, i.e. between the process philosophy of Buddhism (cf. *anityatā*, i.e. non-permanence, ever

changing nature of reality) and the non-process philosophy (cf. *nityatā*, i.e. static or permanent nature of reality) of other schools.

Further, for our understanding in the present context, it is imperative to know that the Buddhists in general follow the basic doctrinal principles, which underly all kinds of Buddhist theories. These foundational principles were actually established by the Buddha himself, namely,

(1) **The most basic dynamic principle**: The universal law of the dynamic principle of dependent arising (Pali *paṭiccasamuppāda*, Skt. *pratītyasamutpāda*), which the Buddha spiritually realized in the process of his wisdom (*bodhi*) and this deepest intuitive experience proved to be the most fundamental breakthrough to know the mysterious dynamics of the Cosmic Nature. In other words, in the case of the Buddha, it was an opening opportunity to know the dynamic nature of the reality as it is (Pali *yathābhūtañāṇadassana*), which underlies every formation of the empirical reality in the domain of the Nature, whether mental or physical. This dynamic process, which involves multiple but unified and harmonious causal conditions, generates an integrated continuity at every unique eventual moment, from past to present to future until a particular chain breaks down and another begins under a different set of causal conditions. But in every case, the process forms a spatio-temporal phenomenal continuant as a mode of reality for the layman in the conventional world. However, whereas the dynamic principle is the ultimate truth for the Buddha's wisdom, the phenomenal or conventional truth marks the world of common man's ignorance (Pali *avijjā*, Skt. *avidyā*) which creates this phenomenal world by means of conceptual thought and perception.

(2) **The second invented principle**: This principle was invented by the Buddha following the preceding dynamic principle of dependent arising covering both the sentient and the insentient beings. The Buddha identifies three characteristics of the reality (Pali *tilakkhaṇa*, Skt. *trilakṣaṇa*), namely, impermanence (Pali *aniccatā*, Skt. *anityatā*), non-substantialism (Pali *anattā*, Skt. *anātmatā*), and the existential predicament (Pali *dukkhatā*, Skt. *duḥkhatā*), which underly the life of the sentient beings like the human beings, whereas the first two applies to the insentient beings like table and stone. Note that all these happen within the domain of the dynamic nature of the Cosmic World.

(3) **The third invented principle**: This principle covers Four Noble Truths (Pali *ariya-sacca*, Skt. *ārya-satya*) designed on the pattern of the therapeutic method by the Buddha – (i) the first truth marks that there is an ubiquitous fact of existential suffering (Pali *dukkha*, Skt. *duḥkha*); (ii) the second truth is that there is an ubiquitous cause of existential suffering, which is grounded in the affliction of craving (Pali *taṇhā*, Skt. *tṛṣṇā*) as well as in the unified trio of attachment/greed/lust/covetousness (Pali *rāga*, *lobha*, *abhijjhā*), hatred/anger (Pali *dosa*), and delusion/ignorance (Pali *moha*, *avijjā*); (iii) the third truth marks that there is a way of elimination of the cause of existential suffering (Pali *dukkha-nirodha*, Skt. *duḥkha-nirodha*); and (iv) the fourth truth is that there is the ultimate treatment of these causal afflictions by means of practice in the eightfold sequential progressive order designated as the Noble Eightfold Path (Pali *ariya-aṭṭhaṅgika-magga*, Skt. *ārya-aṣṭāṅga-mārga*), through which the interested practitioner also attains the state of soteriological liberation (Pali *nibbāna*, Skt. *nirvāṇa*).

(4) **The fourth invented principle**: This principle is called the middle path (Pali *majjhimā paṭipadā*, Skt. *madhyamā pratipat*), which as a spiritual ethical doctrine leads to the enlightenment as well as to the liberation from suffering. It also underlies each stage of the noble eightfold path (Pali *ariya-aṭṭhaṅgika-magga*, Skt. *ārya-aṣṭāṅga-mārga*) and alternatively it reorganizes this path into three categories – virtues (Pali *sīla*, Skt. *śīla*), concentration (Pali/Skt. *samādhi*), and insight of truth or wisdom (Pali *paññā*, Skt. *prajñā*). Besides, this principle not only steers clear the two extremes, namely, sensual lust and self-torment, but also acts as extinction of the existential suffering/dissatisfaction on the one hand and on the other, as antidote it arouses mental peace, discernment, awakening, and the achievement of the ultimate goal of liberation (Pali *nibbāna*, Skt. *nirvāṇa*).

These four doctrinal principles established in the Sutta literature are the foundations of all varieties of the Buddhist perspectives. Subsequently, the scholastic Abhidharmic literature, both Pali and Sanskrit, systematically organized, analyzed, explained, and interpretated the issues contained in the Buddha's preaching at different times and contexts.

Moreover, the radical Sanskrit Abhidharmic doctrine of momentariness developed on the logical interpretation of the concept of non-permanence or impermanence (*a-nityatā*) within the conceptual framework of the process philosophy, which gave rise to various perspectives among the Buddhist schools, namely, Theravāda, Sarvāstivāda–Vaibhāṣika, and Sautrāntika. Ultimately the Sautrāntika perspective – "the moment disappears as soon as it appears without duration" – ended in the radical culmination of the analysis, which conceptually established the fluxional character of the reality of both kinds, mental and physical. But this was not the end of internal disputes. The Mādhyamika Nāgārjuna and Asaṅga–Vasubandhu's pair jumped into this dispute by developing their own conflicting perspectives, such as Nāgārjuna's metaphysical essencelessness (*niḥsvabhāvatā, dharmanairātmyavāda, sarvaḍṣṭiśūnyavāda*) against realism of all varieties and the *pramāṇa*-theories on the one hand and on the other, Yogācāra–Vijñānavāda. Further, we must note that the preceding doctrinal principles become the background of the theories of the systematic Buddhist *pramāṇa*-epistemology, ontology, logic, language, and meaning, which are highly complex and intriguing because they contain multiple non-substantialist doctrines; naturalistic processes, terminologies, and methodologies, such as, duality of ultimate ontological reality and conceptually constructed reality; empiricism and spiritual worldviews; intrinsic and extrinsic processional domains; cognitive-conative-emotive psychology; conditioned and conditioning causal factors in the fluxional processes; experiential phenomenology; cognitive awareness; necessity of mental and moral developments; reductionist analysis; epistemological evidence-centric reasoning; debate between scepticism and seeking certainty in respect of valid-knowledge claims; methodology of association (*anvaya*), dissociation (*vyatireka*), indispensable relation (*avinābhāva*), pervasion (*vyāpti*), and natural relation (*svabhāvapratibandha*) in terms of relation; restriction of the particle 'only' (*eva*), other modes of methodology like implicative negation (*paryudāsa-pratiṣedha*) and non-implicative negation (*prasajya-pratiṣedha*); varietes of inferential inductive and deductive logic; inferential character of word-meaning known as double negation theory; semantics and hermeneutics; and so on are significant for my purpose but the lack of space restricts me to elaborate these issues in detail.

Now let us come back to the theme of the present article, which has three interrelated components, all of which have been functional right from the Buddha's spiritual journey since the time when he was still called Siddhārtha Gautam till he became awakened (i.e. *buddha*, acquired wisdom), delivered discourses, and accordingly practiced in his behaviour (mental, vocal, and physical) throughout his life until his demise (*mahāparinibbāna*). The entire development of the Buddhist literature, during and after the Buddha, shows that it is imbued with the elements of the *pramāṇa*-epistemology, logic, ontology, ethics, soteriology, methodology, and so on which can be explored in the early canons of the Three Baskets (*Tipiṭaka, Tripiṭaka*: the Vinaya, the Suttas, and the Abhidhamma), followed by the commentarial (mainly Buddhaghosa of the seventh century) and the scholastic Pali and Sanskrit literature in historical order, the *Prajñāpāramitā*, Mādhyamika school of Nāgārjuna (first–second centuries CE), the Abhidharma tradition of Vasubandhu, and Yogācāra–Vijñānavāda of Asaṅga, Mahāyānist Vasubandhu, Dignāga (480–540 CE), Sthiramati, Śaṁkarasvāmin, Īśvarasena, and Dharmakīrti apart from self-commentaries (*Svavṛtti*) and various other commentaries by different classical writers. It is interesting to know that all of these differing modes and interpretations of the Buddhist sects have explicitly declared to have been rooted in the Buddha's Sutta literature. It is to be noted that in each developmental era, there have been changes in the language, terminology, methodology, doctrines, and modes of interpretation. In modern era, many radical and critical changes in many ways and foreign languages on the same pattern, have come to light in the vast new literature. However, in the present case, my main focus will be on the three ingenious Buddhist thinkers, namely, Vasubandhu, Dignāga, and Dharmakīrti in the historical order of the classical philosophical development in respect of the present theme. Needless to say, for a Buddhist scholar, the greatest advantage today is the availability of vast literature in respect of the restoration of the lost Buddhist Sanskrit texts from Tibetan versions and the secondary sources in the form of translation and interpretation with modern terminology, methodology, and comparison between Buddhism and Western philosophy by the Western contemporary thinkers.

Further, it would be appropriate to cite some of the great contemporary thinkers, mostly non-Indians, who have explored the Buddhist philosophical ideas and created new perspectives in their writings – especially related to epistemology, logic, and semantics – not only through the available Sanskrit texts on these views, but also through their deep studies, translations, and interpretations of the Tibetan versions of those Sanskrit texts, which are now lost in their original forms. I am mentioning selective some of those prominent thinkers, whose writings are highly useful for my present article: Masaaki Hattori, Shoryo Katsura, Richard Hayes, Brendan Gillon, John Dunne, Claus Oetke, Tom J. F. Tillemans, E. Steinkellner, and R. W. Perrett. Among these, for my purpose, there are three Hattori, Katsura, and Hayes (in some cases jointly with Brendon) whose classical philosophical writings on epistemology and logic of Dignāga and Dharmakīrti are highly enlightening with clarity and authenticity in the matter of translation from the Tibetan sources and the brilliant interpretation with comprehensive critical comments.

Background to Dignāga: The Suttas and the Abhidharma

It is of great importance to begin at the beginning with the Buddha's two most fundamental discourses, namely, the *Ariyapariyesana-sutta* (which contains the description of his autobiographical details of his spiritual journey delivered later than his first discourse, namely, the *Dhammacakkapavattana-sutta* (which contains innovative revolutionary doctrinal principles as explained above in brief). In the former Sutta, the Buddha talks of certain crucial as well as disturbing experiences, disagreement with his co-meditationists, designing the effective meditative formula to radically transform and cultivate the mind, virtuous behaviour to care for the suffering humanity, and the dilemma whether to preach his Dhamma focused on creating the compassionate social atmosphere. In the process of his spiritual sojourn from one place to another, the Buddha had exposed the dangerously dogmatic character of the existing multiple religious views and beliefs, which were also called *dhamma* (plural *dhammā*) by him but they were unwarranted for liberation from suffering, rather they had the potentiality of creating more suffering because of false belief and ignorance. Thus, he calls his *Dhamma* as "sailing against the current (*paṭisotagāmī*)," which is the most unique revolutionary path that goes against all other opinions (*diṭṭhi*), religions, conceptual disciplines (such as epistemology, metaphysics, spirituality, ethics, etc.) with dogmatic characteristics, which lack the path of awakening and ethical practices to help the common humanity to be liberated from the existential predicament. It is for these reasons that a number of Buddha's discourses are deeply sceptical about the efficacy of these perspectives, because they go along the current (*anusotagāmī*) without awakening or wisdom, virtues, meditative practices, purity of mind, loving kindness, compassion, sympathy, equanimity, and so on, which are essential for every sufferer to cultivate his/her own potentiality to mitigate his/her own suffering as well as helping others to overcome their own suffering.

This spiritual schema of the Buddha is strictly followed in some or other ways by each Buddhist stream of thought and the disciples, such as (i) Vasubandhu' Abhidharma and Yogācāra–Vijñānavāda; (ii) Dignāga's intention to maintain the purposeful restriction of limitless scope and thus he concentrated on reshaping the Buddhist traditional doctrines, for which he continued critically examining the various forms of Buddhist assumptions, epistemological and logical formulations, language, and semantic views along with his noticing scepticism and nominalism in them on the one hand and finding the same problems in the non-Buddhist opponents' views, which were critically examined and rejected on the other; and (iii) Dharmakīrti's revisiting of Dignāga's various problematic theories, which required correction in terms of Dharmakīrti's principle of natural causality, epistemology, logic, semantics, language, ontology, mind-only theory, scriptures, other's mind, and rebirth. As a result, Dharmakīrti is both empiricist in the worldly matters and idealist in achieving the transcendental goal. Again, in other words, whereas Dignāga explicitly reconsiders and resurrects the implicit unorganized and developed ideas and theories of his Buddhist predecessors and critically examines and rejects his opponents' unwarranted dogmatic worldviews and theories, Dharmakīrti on the other hand adopts cautiously the ideas and theories of his predecessors like

Sautrāntika realism and Yogācāra–Vijñānavāda idealism/phenomenalism with the critique of both Dignāga and the non-Buddhists on the same issues and thus he resurrects with radical innovations of his own theories. Moreover, Dignāga, a disciple of Vasubandhu, sincerely takes thorough advantages of Vasubandhu's insightful ideas, sharp arguments, and methods specifically found in the latter's numerous texts like *Abhidharmakośakārikā-bhāṣya* with Sautrāntika realistic perspective, *Vijñaptimātratāsiddhi* with idealistic/phenomenalistic Yogācāra–Vijñānavāda perspective, and many logical texts like *Vādavidhi* and *Vādavidhāna* concerning the logical rules applied in debates. As a result, Dignāga wrote a number of innovative texts like *Nyāyamukha*, *Ālambanaparīkṣā*, and the most mature text *Pramāṇasamuccaya-vṛtti*, a mature text consisting of *pratyakṣa-pramāṇa*-epistemology, *anumāna-pramāṇa*-logic, and *apoha*-semantics. Dharmakīrti is not only a promoter and commentator of Dignāga, but also a creative writer of his own innovative ideas, which not only resurrects the Buddhist logic of Dignāga but also dominates through his influence on the Indian logic as a whole. Moreover, to be noted, Dignāga's famous and insightful post-Dharmakīrti commentator Jinendrabuddhi uses Dharmakīrti's epistemological and logical ideas to resurrect Dignāga's various theories.

Vasubandhu's Influence on Dignāga's Logic

We have seen above that in two areas, namely, Abhidharma in early Buddhism (Hīnayāna) and Yogācāra–Vijñānavāda in later Buddhism (Mahāyāna), Dignāga has been tremendously influenced by Vasubandhu. Further, Vasubandhu has written two separate texts in the third area of dialectics-cum-logic for debates, namely, *Vādavidhi* which was criticized by Dignāga in his *Pratyakṣa-pariccheda* of *Pramāṇasamuccaya* because it was found to be lacking the Buddhist perspective, but Dignāga recognized Vasubandhu's second text, i.e. *Vādavidhāna*, as mature with the Buddhist approach, which seriously influenced Dignāga so much so that "He wrote a commentary on the *Vādavidhāna* of Vasubandhu. In composing the *Nyāyamukha*, he seems to have followed the pattern of Vasubandhu's work on logic. In many others of his works, we can point out the influence of Vasubandhu's Sautrāntic and Yogācāric thoughts." [30, 3; also see 31] In this way, Dignāga became well conversant with Vasubandhu's creative writings and methods as a whole. Thus, these three areas proved to be robust foundations of the development of Dignāga's radical ideas throughout his academic career. Since the dialetics or debate schema was inner-directed for a group of a few participants, contrary to it, he decided to focus on the limited scope of the study of knowledge within the system of *pramāṇa*-formulation in the areas of epistemology, logic, and semantics with radical transformation so that this task suited the Buddha's *pramāṇa*-centric insights (*pramāṇabhūta*) for interested general audience. Further, just as Vasubandhu's *Viṁśatikā* gave way to Yogācāra idealism/phenomenalism and mind-only theory, Dignāga wrote *Ālambana-parīkṣā*, which proved to be the foundation of his most mature *Pramāṇasamuccaya* with *Svavṛtti*. Hattori [30, 3, n. 16] writes: "In the *Ālambanaparīkṣā*, Dignāga proves that the object of cognition (*ālambana*) is nothing other than the appearance of an object in cognition itself. On the basis of this conclusion, he expounds the theory of self-cognition (*sva-saṁvitti*) in the *Pramāṇasamuccaya*."

It is worth remarking to know that despite his predecessor Vasubandhu's texts possessing comparative clarity in expression of the doctrines and the methods, Dignāga has not learnt to follow them to provide clear and better explanation of his views so that his learners and commentators can sufficiently understand his elliptic theories. For this reason, Dignāga's writings are considered enigmatic and problem generating, although he shows his ingenious philosophical insights in developing his innovative ideas. In the Preface to Hattori's pioneer and path-breaking work [30] – in his translation of the first chapter (*Pratyakṣa-pariccheda* with *Svavṛtti*) of Dignāga's *Pramāṇasamuccaya* (*Compendium of the Unity of Valid Ideas*) – which is endowed with the highest clarity and the exceptionally rich annotations, Ingalls exposes Dignāga's deliberate elliptical style for maintaining extreme form of brevity, which excessively creates numerous grammatical, syntactical, semantic, and hermeneutic problems in his Sanskrit text *Pramāṇasamuccaya* containing almost 200 verses, because of which his own insightful commentators like Jinendrabuddhi face confusion, not to

talk of the common readers, besides Buddhist scholars, and thinkers, to understand his epistemological, logical, and linguistic intention and views. More so, it is a fact that many of his original texts in Sanskrit are lost including the *Pramāṇasamuccaya* with its *Svavṛtti* and such texts are not completely restored either from the Tibetan version into Sanskrit or translated into English. Even if some of them are translated into English or restored into Sanskrit, they are not perfect in a strict sense, not to talk of most of the modern scholars' understanding of Dignāga's texts except few ones. Again, Dignāga's brevity appears as if he is addressing his views to his intimate small group, not to his general scholarly audience/students. Ingalls' (Editor's Foreword) further observations [30, vi-vii] make the issues clear:

> There was no attempt, at least until some centuries after Dignāga's time, to set forth philosophical ideas in a fully explained exposition that a general reader might understand. For in Dignāga's time there were no general readers; such persons as could read had been trained in very special disciplines, first in Sanskrit grammar, and then in ritual exegesis, philosophy, law, or some such field. Now, the more inner-directed a group's communication, the more elliptical will its expression be. Persons who have lived with each other many years, who have passed through the same education and had many of the same experiences, need mention only the briefest selection of thought and their companions can conceive the whole vision and can set it in order with other visions just as it was ordered in the speaker's mind. One may observe this ellipsis in the conversations of man and wife, in the shop talk of artisans, and in the communication of workers engaged in any specialized research. One finds it in a peculiarly impenetrable form in the writings of Dignāga.

In the same vein, I try to summarize Ingalls' further remarks that (i) Dignāga's Self-commentary (*Svavṛtti*) could not go beyond his limited inner circle, which was accustomed to his brevity to understand his intention, arguments, and innovative ideas; (ii) in his *Svavṛtti*, instead of elaborating with clarity his own positions on *pramāṇa*-epistemology, for example, in the very first chapter, *Pratyakṣa-pariccheda*, he doubly engaged himself in criticizing the perception-theory of his own teacher Vasubandhu's fault-laden text *Vādavidhi*, about which Dignāga in his *Pramāṇasamuccaya*, did not believe that this text would be authored by an ingenious scholar like Vasubandhu, but he appreciated his second excellent text *Vādavidhāna*, which deeply influenced him. In his *Pratyakṣa-pariccheda*, Dignāga elaborated his own view much less than he polemically criticized the non-Vijñānavādin opponents, namely, Nyāya, Vaiśeṣika, Sāṁkhya, and Mīmāṁsā; (iii) Dignāga radically changed the mainstream *pramāṇa*-formulation of Indian logic in general as well as he limited the nature and scope of knowledge; (iv) on the negative side, despite being under the influence of Dignāga's celebrated commentator like Dharmakīrti, Dignāga's promoter Jitendrabuddhi could not overcome Dignāga-generated serious difficulties because of which Jinendrabuddhi left many problems unexplained; (v) Hattori knew all these difficulties in the situation of the absence of Dignāga's original texts and so he adopted the methods of applying square brackets to fill in the syntactical gaps on the one hand and on the other, employing the technique of annotations, twice the length in both cases.

Moreover, as we know, Dignāga's immediate predecessor and teacher was Vasubandhu, who was one of few ingenious thinkers in the Buddhist tradition. He wrote a number of texts both in the early humble Hīnayāna and the later great Mahāyāna traditions covering the three prominent Buddhist areas, two belonging to early tradition – namely, (i) Sarvāstivāda–Vaibhāṣika which was established in his *Abhidharmakośa-kārikā*; (ii) but its doctrines were vehemently refuted and the Sautrāntika doctrines were established in his *Abhidharmakośa-kārikā-bhāṣya* in its place by him; and (iii) his *bhāṣya* facilitated the development of Mahāyāna Buddhist tradition of Asaṅga's Yogācāra–Vijñānavāda. Dignāga was deeply and widely influenced by the latter two areas, namely, (i) early Vasubandhu's Abhidharma philosophy so much so that he wrote *Abhidharmakośa-Marmadīpa* and (ii) later Vasubandhu's Yogācāra–Vijñānavāda texts, which covers four different areas with different

interpretations by modern scholars – phenomenological idealism, phenomenalism, nominalism, and mind-only. Further, Vasubandhu's *Vijñaptimātratāsiddhi* containing two tracts, namely, (1) the *Viṁśatikā*, which criticizes realism of early Buddhism giving way to the Yogācāra perspective in the *Triṁśikā* including *Trisvabhāva-nirdeśa* apart from many more independent texts and commentaries in this area. It is to be noted that he also composed two texts in the areas of the rules of debate, epistemology, and logic as mentioned above. But Dignāga broadened the latter two areas only, namely, epistemology and logic. His works also show the influence of Buddhist Nāgārjuna and many non-Buddhist thinkers such as Grammarians like Pāṇini, Patañjali, grammarian philosopher Bhartṛhari, Sāṁkhya, Nyāya, Vaiśeṣika, and Mīmāṁsā in the course of modifying his doctrines and methodology for both purposes of strengthening his position as well as refuting his adversaries. Some classical thinkers like Dharmakīrti and Jinendrabuddhi in a sense highlight the negative side of Dignāga's philosophical evolution and scattered innovative ideas, because with the passage of time he created multiple problems, which caused extreme kinds of difficulties in understanding his finally established position, although he struggled hard at the end of his career to unify his scattered ideas and theories in his most mature text the *Pramāṇasamuccaya* and *Svavṛtti*.

However, Dignāga's radically systematic formulations of *pramāṇa*-centric epistemology, logic, and language are applied by him for the sake of cultivating and promoting the spiritual purpose. Alternatively, this schema is supposed to aim at following the pattern of the practice of the Buddha's way of overcoming the primary concerns of the achievement of freedom from the suffering or the existential predicament (*duḥkha-nivṛtti*) and acquisition of the lasting peace (*nirvāṇa*). Again, it is imperative to know and fulfil the preconditions by means of practice on the path of the Buddha to achieve this goal. The first step in this process is to expose and eliminate the dangers of ignorance, irrationality, superstitions, speculative thought, and dogmatic beliefs, because they have the potentiality of creating more suffering, and then to use the appropriate strategy to overcome them. In this way, Dignāga establishes his final philosophical-cum-soteriological position in his *Pramāṇasamuccaya* and *Svavṛtti*.

In this context, Hayes [19, 5] quotes Ernst Steinkellner's [39, 11] summary of Vetter's remarkable statement suitable in the present context:

> Valid cognitions (*pramāṇa*, *samyakajñāna*) are a necessary presupposition of meaningful human action. The Buddhist's actions are oriented towards the goal of emancipation. This goal and the path towards it have been shown by the Buddha. The Buddha thus offers a goal and guidance for human activity that cannot be derived from ordinary means of cognition, i.e. perception and inference. However, that he is an authority for this has to be proven, for faith alone is an insufficient motive to be a Buddhist. The words of the Buddha can be accepted as an authority only when it has been demonstrated that they are words of somebody who shows through his conduct that he does not lie, and who because of the development of his experience has something to tell us that cannot be mediated to us in another way. For the last goal of human actions, which also is the only point of orientation for everyday human practice, has to be indicated by such an authority, since it is never immediately present--or it would not be a "last goal."

The *Pramāṇa*-epistemology of Dignāga

Epistemology is generally considered to be a comprehensive theory of knowledge, which is structured in the *pramāṇa*-formulation with four integrated components as discussed above: (i) instrument/means/ways of the process of knowing (*pramāṇa*), (ii) valid cognition (= knowledge, *pramā*), (iii) the object to be known (*prameya*), and the resultant cognition arising from the process of knowing (*pramāṇaphala*). This systematic formula was innovated against the background of the traditionally unsystematic logical debates on various philosophical issues so that all participants with different doctrinal perspectives argue in favour of their positions and disagree with their adversaries. It was commonly adopted by all Indian schools of thought except Nāgārjuna who challenged the

pramāṇa-system for his own reasons because he saw conflicting approaches, which create sceptic attitude and harm the Buddha's path of overcoming the human suffering. Nevertheless, all schools including Buddhism and Vedānta follow the realist Nyāya schema at the practical conventional level (*vyāvahārika-sat*) even if their deeper epistemological and metaphysical doctrines are beyond the conventional reality (*saṁvṛtti-sat*) because they are rooted in the ultimate reality (*paramārtha-sat*).

The *pramāṇa*-epistemology, which is an umbrella theory of knowledge, structures its own conceptual and categorical framework so that it can cover within its own domain all means of knowing. Note that the perceptual knowledge is the root of all other sources of empirical knowledge, but mind that perception itself has two modes – empirical (*laukika*) and transcendental (*alaukika*). The latter does not involve external objects and sensory faculties, rather it is meditational or intuitive in the Indian sense. Further, the *pramāṇa*-epistemology raises questions and issues in respect of knowledge (*jñāna*, *pramā*, *vidyā*) such as necessity of knowledge, nature (*svarūpa*), origin (*utpatti*), criteria of validity, maintaining non-erroneousness in the process of knowledge, types (*saṁkhyā*), object (*ālambana*, *viṣaya*, *gocara*), result (*phala*), knowledge of resulting cognition (*phalajñāna*), and ascertainment (*jñapti*). These are conventional issues and their accomplishment, which precede the successful human values (*puruṣārthasiddhi*) with two discriminatory options of non-acceptable (*heya*) or acceptable (*upādeya*) cognitive result. This is technically called *pramāṇavāda*. Besides, the Indian epistemologists also talk of the theory of truth (*prāmāṇya*, *pramātva*) in different ways, which aims at the analysis of the criteria of truth if there is any and the way of apprehending the truth, which is the differentiating characteristic of knowledge episodes (*pramā*). Perrett [35, 51] writes:

> The central issue that the theory of the apprehension of truth (*prāmāṇyavāda*) addresses intrinsically (*svataḥ*) or extrinsically (*parataḥ*): in other words, whether a cognition and its truth are apprehended together, or whether it is only through a second cognition that one apprehends the truth of the first cognition. . . The Buddhist logician Dharmakīrti . . . defines truth pragmatically in terms of 'successful activity' (*arthakriyā*). All parties in the debate, however, accept that coherence and workability are at least marks of truth.

Further, all kinds of Buddhist experience, concept, and philosophical theory – whether ontological, epistemological, logical, linguistic, ethical, and soteriological in which semantics and hermeneutics are foreshadowed – are structured and developed within the radical dynamic process philosophy of impermanence or non-eternity (*anityatā*), which is logically developed into fluxional momentariness (*kṣaṇabhaṅgavāda*) and non-substantialism (*anātmatā*) or non-essentialism, all of which are rooted in the Buddha's dynamic law of dependent/conditioned arising (*pratītyasamutpāda*). These are the two basic characteristics of reality. Dignāga absolutely believes in the authoritative wisdom of the Buddha (*pramāṇabhūta*), that is, he knows the absolute truth of reality as it is (*yathābhūtañāṇadassana*), which (i.e. wisdom) is the means of valid cognition, since the Buddha's knowledge is always based on the critical investigation and test of reality, truth, and the pragmatic practice. At his personal level, Dignāga is convinced about the Buddha's authority, wisdom, saying, and doing. Rather, he is actually doubly convinced about these qualities of the Buddha, which are not just out of reverence. With this intention, he first critically examines the Buddha's own statement, method, and practice, because the Buddha himself insists on his disciples not to take them for granted without examination. Now in every aspect of his spiritual project, Dignāga critically examines it – semantically, hermeneutically, and methodologically – and only after finding it valid and truthful he adopts the Buddha's doctrines and practice and he develops his own innovative ideas. In this context, Dignāga formulates a guiding principle in a verse, which is quoted in the *Tattvasaṁgraha*, *kārikā* 3587 (also quoted in Kamalaśīla's *Pañjikā*, [7, 15]; see [30, 73, n. 1.1]):

tāpāc chedāc ca nikaṣāt suvarṇam iva paṇḍitaiḥ /
parīkṣya bhikṣavo grāhyaṁ mad-vaco na tu gauravāt // (*kā*. 3587)

Translation: O [Venerable] Monks, [note that] the wise one should agree with my statement only by testing its validity, not out of reverence to me, just as a goldsmith accepts the purity of gold only by testing it in fire, cutting it, and carefully testing it on a touchstone.

Again, this verse shows that Dignāga's method of testing before he accepts the truth of a statement whether it is conventional, spiritual, or scriptural only by testing it through critical examination, which is the way of the Buddha's attitude of truthfulness and virtuous behaviour – mental, vocal, and physical practice. Dignāga claims that he strictly follows the Buddha's method of testing a view epistemologically, logically, semantically, and pragmatically regarding the validity of the truth of knowledge and the ultimate reality. Dharmakīrti too follows this method sincerely and elaborately. Like many other claimants, Buddhist or non-Buddhist, the Buddha and his followers including Dignāga and Dharmakīrti maintain that the valid knowledge is an indispensable factor for attainment of the soteriological goal. That is why, it is necessary that the *pramāṇa*-epistemology must be critically examined to ascertain the truth of knowledge. John Dunne [10, 16, n. 4] makes a significant comment on the crucial issues of a *pramāṇa*-theory:

> Matilal understands *Pramāṇa* Theory to be based upon what he calls the "Nyāya method." He notes that this method "aimed at acquiring evidence for supporting a hypothesis . . . and thus turning a dubiety to certainty" . . . [46, 69]. He also notes, "The goal of the Nyāya method is a *nirṇaya*, a philosophic decision or a conclusion which is certain." Even a cursory glance at the literature within this style of discourse shows that its philosophers were concerned with certainty (although we will see in chapter 4 that certainty need not entail veridicality). It is important to note that for these philosophers, the pursuit of certainty requires some initial doubt (*saṃśaya*) or desire to know (*jijñāsā*) as its motivation. See NBh [*Nyāyasūtra-bhāṣya*] (35) ad NS [*Nyāyasūtra*] 1.1.1, *nānupalabdhe na nirṇīte 'rthe nyāyaḥ pravartate kiṁ tarhi saṁśayite 'rthe*. Dharmakīrti (for example, PVSV [5] [*Pramāṇavārttika-svavṛtti*] ad PV [4] [*Pramāṇavārttika*] 1.46) also maintains this view. (*Square brackets are mine*.)

Secondly, Dignāga is deeply influenced by Vasubandhu's Abhidharmic scholasticism, which establishes the critical realism of the Sautrāntika school, which denies any duration of a moment, which means 'a moment disappears as soon as it appears' and the idealism/phenomenalism of Yogācāra–Vijñānavāda, whereas the Sautrāntika Abhidharma maintains the duality of two modes of truth: (i) Ultimate Truth (*paramārthasat, dravyasat*), which is dynamically subtle, spatio-temporally unstructured, infallible, indeterminant, non-conceptual, and irreducible; and (ii) conventional truth (*saṁvṛttisat, prajñaptisat*), which lacks wisdom, conceptuality, phenomenality, seemingly spatio-temporal structure, and determination. Thus, Vasubandhu distinguishes between these two exclusive truths and explains them:

> Text: Vasubandhu [1, 890] [also see 19, 109]:
> *yasminn avayavaśo bhinne na tadbuddhir bhavati tat saṁvṛtisat. tadyathā ghaṭaḥ. tatra hi kapālaśo bhinne ghaṭabuddhir na bhavati. yatra cānyān apohya dharmān buddhyā tadbuddhir na bhavati, accāpi saṁvṛtisad veditavyam. tadyathā ambu. tatra hi buddhyā rūpādin dharmān apohyāmbubuddhir na bhavati. teṣv eva tu saṁvṛtisaṁjñā kṛteti saṁvṛtivasāt ghaṭāmbu cāstīti bruvantaḥ satyam eva āhur na mṛṣā. ity etat saṁvṛtisatyam.*
>
> *ato anyathā paramārthasatyam. tatra bhinne 'pi tadbuddhir bhavaty eva. anyadharmāpohe 'pi buddhyā tat paramārthasat. tadyathā rūpam. tatra hi paramāṇubhinne vastuni rasārhān api ca dharmān apohya buddhyā rūpasya svabhāve buddhir bhavaty eva. evaṁ vedanādayo 'pi draṣṭavyāḥ.*
>
> Translation [19, 95–96]

> That is conventionally real of which there is no perception when it is broken into parts. An example is a water-jug, because when that is broken into shards there is no perception of a water-jug. And that should also be understood as conventionally real of which there is no perception when one has mentally sorted other properties out. An example is water, because when one has mentally sorted such properties as material form out, there is no perception of water. But conventional designations are applied to those very things, so one who says on the authority of convention that there is a water-jug and there is water is speaking the truth rather than a falsehood. And. so this is a conventional truth.
> The rigorously real is different from that. That is rigorously real of which there does arise a perception even when it is broken and even when there is mental abstraction from other properties: An example is material form *(rūpa),* because when that object is broken into atoms and even after sensible properties are sorted out by the intellect, the perception of the essence *(svabhāva)* of material form does arise. Feelings can be viewed in the same way.

Vasubandhu on Inferential Logic

The origin of systematic epistemology and logic of Buddhism lies in Vasubandhu's three texts mentioned below followed by his disciple Dignāga who developed Vasubandhu's ingenious ideas on the basis of his creative and innovative insights by exploring his three areas – (i) Sautrāntika's critical realism; (ii) Yogācāra phenomenalism and idealism or the theory of mind-only; and (iii) his two logical texts *Vādavidhi* and *Vadavidhāna*. These three areas of Vasubandhu proved to be indispensable and useful for Dignāga's numerous works. The creative period between Vasubandhu and Dharmakīrti includes both Buddhist and non-Buddhist thinkers, who apply the method of critical examination against each other in debates and writings. In-between and in post-Dharmakīrti period a number of commentaries and independent texts were also written, all of which amazingly enriched the areas of epistemology, logic, and language. Here it would be better to cite the names of some of the prominent thinkers with their relevant works in the historical order, namely, (i) Buddhist Vasubandhu's *Vādavidhi*, *Tarkaśāstra* and *Vāda-vidhāna*; (ii) Dignāga's *Nyāyamukha* and *Pramāṇasamuccaya*; (iii) Buddhist Śaṁkarasvāmin's *Nyāyapraveśa*; (iv) Naiyāyika Uddyotakara's *Nyāyavārttika*; (v) Vaiśeṣika Prasastapāda's *Padārthadharmasaṁgraha*; and (vi) Dharmakīrti's *Pramāṇavārttika*, *Hetubindu*, and *Nyāyabindu*. Oetke [35] has discussed the mutual dialogue of these thinkers on logic, especially on the theme of the theory of three-criteria of reason (*trairūpyaliṅga*) in historical, philological, and hermeneutic manners applying the modern methodology. It is important to know as Gillon [15, 197] observes: "The study of inference in India is not the study of valid reasoning as reflected in linguistic or paralinguistic forms, but the study of under what conditions certain facts require the existence of some other fact, or under what conditions knowledge of some facts permits knowledge of some other fact, or under what conditions acceptance of some facts permits acceptance of some other fact. At the core of the study of inference in India is the use of a naïve realist's ontology." It is a fact that even the Buddhists adopt this kind of ontology, particularly the empirical realist Nyāya–Vaiśeṣika's seven kinds of ontological categories (*padārtha*) – substance (*dravya*), quality (*guṇa*), action (*karma*), universal/generality (*sāmānya*), particularity (*viśeṣa*), inherence (*samavāya*), and non-existence (*abhāva*) – and the theories of logic (i.e. *anumāna*-epistemology) within the world's multiple forms of reality ranging from the subtlest reality of the atoms (*avayava*) to the reality of the universal (*sāmānya*), although at the conventional truth level (*saṁvṛttisat*, *prajñaptisat*), not at the ultimate truth level (*pramārthasat*, *dravyasat*). In this way, the Buddhists divide the world into two forms as per the demand of their process philosophy rooted in impermanence/momentariness (*anityatā*, *kṣaṇabhaṅgavāda*) and non-substantialism (*anātmatā*).

The basic aim of Indian logic is to differentiate between good reasoning and bad reasoning depending on the expression of arguments, in some or other way of the forms of language, written or vocal, which may lead to genuinely good arguments with truth in conclusion or to bad arguments

with untruth in the conclusion. However, in each case, the Indian logicians use 'an argument from analogy' to be followed by 'an argument from a similar form,' for communication to others in syllogistic manner. With this brief observation Gillon [16, 311–312] explains Vasubandhu's contribution to the Buddhist logic in his three texts lost in original Sanskrit but preserved in Tibetan or Chinese – (*Rules of Debate* (*Vādavidhi*), *Treatise on Reasoning* (*Tarkaśāstra*), and *Precepts of Debate* (*Vāda-vidhāna*) – which contain insightful and innovative ideas for Dignāga to develop his own creative ideas by improving Vasubadhu's imperfect theory of logic. Gillon [*Ibid*.] summarizes Vasubandhu's innovative foundational ideas, which I have quoted and at some places paraphrased and rearranged, as follows:

(1) *Rules of Debate* (*Vādavidhi*):

- Vasubandhu selects various necessary technical terms and defines them, namely 'thesis' (*pratijñā*), "which comprises a term denoting the argument's subject (*pakṣa*) and a term denoting the property to be established (*sādhya*) in the subject. He also identifies the term for the ground (*hetu*), which, in the argument, is ascribed to its subject." [*Ibid*., 311]
- "He explains that the ground bears the relation of *indispensability* (*a-vinā-bhāva*), literally, not being without, or being *sine qua non*) with respect to the property to be established." [*Ibid*.] Vasubandhu's notion of the relation of *indispensability* (*a-vinā-bhāva*) will be elaborated separately below.
- "Finally, he identifies a term denoting a corroborating instance (*dṛṣṭānta*) which illustrates the indispensability relation borne by the ground to the property to be established." [16, 311–312]

(2) *Treatise on Reasoning* (*Tarkaśāstra*)

- Vasubandhu coins a new term, namely *tri-rūpa-hetu*, i. e. three characteristics/ criteria/ conditions of a logical reason/ ground (*hetu*).
- "The first condition is that the ground (*hetu*) or H, which should occur in the subject of an argument (*pakṣa*), or p."
- "The second is that the logical ground (*hetu*), or H, should occur in things similar to the subject (*pakṣa*)."
- "And the third is that the logical ground (*hetu*), or H, should not occur in things dissimilar from the subject (*pakṣa*)."

(3) *Precepts of Debate* (*Vāda-vidhāna*): Unfortunately, this text is lost.

Vasubandhu's Principle of Necessary Relation (*avinābhāva*)

By now it is obvious that the Buddhist logic (*anumāna*-epistemology) is experientially, psychologically, pragmatically, and formally (i. e. syllogistically) programmed to give rise to a new knowledge for both self and communication to others within the conceptual framework of common-sense realism. In Buddhism, each episode of new knowledge, whether perceptual or inferential develops through a process of multiple homogeneous conditions facilitated by the dynamic principle of conditioned or dependent arising (*pratītyasamutpāda*). In another sense, logic aims at the valid arguments. But the question is: How do we begin with the process of logic (*anumāna*)? The answer is we confront with different kinds of experiences, some of which compel us to reflect on them. One kind of experience is cognizing very often the smoke-fire cooccurrences in a kitchen or a forest, etc. together. But it also happens that we cognize a body of smoke arising from the kitchen when we are outside the kitchen or cognize smoke arising from a specific context like a mountain without cognizing the fire. For a common man this is not a surprise and he takes it for granted that the smoke is not separate from the fire in the mountain. Such experiences accumulate in our memories. Thus, this is an easy way of inferring fire in the mountain, but not in a place in which smoke and fire cannot occur together, for instance, in a lake or sky far away from the source. However, for an investigator it is a matter of reflection so that a systematic explanation of a valid inferential knowledge can be acquired. To start with a process of inference, a logician like Vasubandhu identifies some technical terms already in practice by the predecessors, namely, argument's thesis/hypothesis (*pratijñā*),

argument's subject (*pakṣa*), a term denoting a property to be established (*sādhyadharma*), ground/reason/evidence (*hetu*, *liṅga*). But in such a case, Vasubandhu feels uneasiness because these terms and the inferential process do not give a proper account because there is a lack of the logically reasoned certainty. To solve this problem, he innovates a term, namely, *a-vinā-bhāva*, which means not-being-without, i.e. a principle of necessary relation between the ground and the property to be established (See [16, 311]).

Nevertheless, Frauwallner in his article "Vasubandhu's Vādavidhiḥ," [12] restores from Tibetan version the two most important definitions of the relation of *indispensability* (*a-vinā-bhāva*), which are elaborately discussed by Oetke [34, 11–16, 108–117]. I am quoting these two definitions below:

> Def. I: *tādṛgavināBhāvidharmopadarśanaṃ hetuḥ*
> "The (logical) reason is the pronouncement of a property which does not occur without a such (= which is inseparably connected with a *probandum*).
> Def. II: *nāntarīyakārthadarśanaṃ tadvidho 'numānam*
> "Inference is the observation of an object not occurring without [the *probandum*] for someone who knows that."

Oetke explains clearly the meaning of these definitions in his words: "Both the linguistic form of these definitions and the subsequent comments on them in the text suggest that according to the author a prerequisite for the existence of a logical reason or an inference is that an entity has been mentioned or observed which fulfils the following condition: It never occurs that the entity in question exists somewhere but the thing which has to be proven or to be inferred does not exist at the same time."

The Pramāṇasamuccaya: Dignāga's Mature and Final Text

Hattori [30, 12] in his pioneer and foundational work – *Dignāga, On Perception: being the Pratyakṣapariccheda of Dignāga's Pramāṇasamuccaya*(*-Vṛtti*) – has restored the first chapter (*Pratyakṣapariccheda-vṛtti*) from its Tibetan version into Sanskrit and then translated it into English with vast annotations. He treats the *Pramāṇasamuccaya with vṛtti* [2] as "a systematic exposition of epistemology, logic, and language/semantics." As the title shows, Dignāga's *Pramāṇasamuccaya*, a text on *Pramāṇa*-epistemology in different modes, especially concentrated on dealing with the complex but pragmatic issues of knowledge for the sake of general readers, shows that it is a text containing (*samuccaya*) the unity of his earlier and final validated ideas elaborated in its six chapters. Note that it is also a polemical text against the adversaries. Another great modern scholar following the study of a part of PS(V) of Hattori's book [30] is Richard Hayes [19] who has a larger philosophical approach to Dignāga's *Pramāṇasamuccaya* covering the detailed background in the range from the Suttas to the Abhidharma literature and finally moves to Dignāga's broader and critical study of the same text with its partial translation of two important chapters from Tibetan into English by Hayes [19], namely, Chapter II: On Reasoning (*Svārthānumāna* and *Parārthānumāna*) and Chapter V: On the nature of signs in language (*apohavāda*, a double negation theory) apart from his studies on Dignāga's earlier texts and such pre-Dignāga's themes like Buddhist scepticism, nominalism, phenomenalism, and so on exploring them through the Buddha's Suttas, Nāgārjuna's *Mūlamadhyamakakārikā*, Vasubandhu's *Abhidharmakośakārikā-bhāṣya* and *Vijñaptimātratāsiddhi* (a Yogācāra text), and Dignāga's theory of knowledge based on the *Pramāṇasamuccaya* with *Svavṛtti*. All these studies of the two great modern thinkers, besides researches of some other prominent thinkers like Frauwallner, Katsura, and Steinkellener, show that Dignāga has widely benefitted from and adopted his predecessors' ideas to develop of his comprehensive radical project on the theory of knowledge. Further, Hayes has also written some long research articles on Dignāga's celebrated commentator Dharmakīrti in collaboration with Gillon [21]. Most of these materials are very relevant for my present article, which is focusing on the issues of epistemology, logic, and semantics in brief as its title shows. I am listing below some of the brief observations made by Hattori

[30, 11], which mark Dignāga's ingenious and radical ideas imitating the Buddha's radical ways of thinking and practice, the valuable ideas of his predecessors and own earlier ideas, all of which mark the three areas of epistemology, logic, and language:

1. Dignāga's innovation of a short but brilliant formulation of the logical ideas concerning the valid and invalid reasoning in his text *Hetucakraḍamaru* included in his other important text *Nyāyamukha*. During that time this formulation was utilized as a dialectic method for the purpose of defeating the adversaries in limited contexts.
2. But Dignāga decided to ignore this approach because it was for smaller groups and so for general readers he concentrated on the development of a theory of knowledge in a broader sense in PS (V) [2].
3. In the first chapter of PS (V) [2], in the area of *pramāṇa*-epistemology, in a radical way, he invented the radical formula of *pramāṇādhinaḥ mānasiddhiḥ* (proving the object of knowledge, *prameya*, by means of knowledge, *pramāṇa*) against the remaining opponents' formula of *meyādhinaḥ mānasiddhiḥ* (the means of knowledge, *pramāṇa*, is determined by the object of knowledge, *prameya*,). Another point is that Dignāga maintains the exclusive duality of (i) perception (*pratyakṣa*) limited by mere pure sensation as a particular (*svalakṣaṇa*) without structure and conceptual tag and (ii) inference (*anumāna*) endowed with structure, concept, and universal (*sāmānyalakṣaṇa*) manipulated by the dynamics of mind (*kalpanā*).
4. Two modes of inference or logic: inductive inference or 'inference for one-self (*svārthānumāna*) endowed with personal psychological characteristic and deductive or syllogistic inference (*parārthānumāna*) for communication to others.
5. In the area of language or semantics, Dignāga treats the function of language – word, meaning, and communication – as a variety of inference, which is not an independent means of knowledge.

Structure of the Pramāṇasamuccaya

The title of Dignāga's present text carries two words, *pramāṇa* (meaning: a means of acquiring new knowledge of two exclusive kinds – perception and logical reasoning) and *samuccaya* (meaning: a collection; in other words, the unity of his earlier and latest ideas developed in his such prominent texts as *Abhidharmakośa-Marmadīpa*, *Ālambanaparīkṣā*, *Hetucakraḍamaru*, and *Nyāyamukha*, among which the *Nyāyamukha* was utilized maximum by Dignāga). This was how his mature final book, the *Pramāṇasamuccaya*(*-svavṛtti*) was composed. Thus, he fulfilled his primary concern of establishing his *pramāṇa*-theories with powerful innovative ideas. But he had another serious concern as well, that is, he wanted to refute other dogmatic *pramāṇa*-theories, which were based on speculative postulations. Here it should also be noted that Dignāga was influenced by many more sources, apart from the Buddha's Sutta literature and his teacher Vasubandhu's texts such as *Abhidharmakośa-kārikā*, its *Bhāṣya*, *Vijñaptimātrātasiddhi*, *Vādavidhi*, *Vādavidhāna*, and many other texts in which he has developed multiple philosophical perspectives relating to Sarvāstivāda–Vaibhāṣika, Sautrāntika, Yogācāra–Vijñānavāda, rules of debate, and logical reasoning. On the other hand, he has been influenced by other Buddhist and non-Buddhist sources, which are mentioned by Hattori [30, 3, n. 17) based on Frauwallner's researches:

> The *Prajñāpāramitāsaṁgrahakārikā* summarizes the contents of the *Prajñāpāramitāsūtras* in thirty-two topics, of which the main ones are (a) sixteen varieties of voidness (*ṣoḍaśavidhaśūnyatā*), and (b) ten kinds of mind-distraction *(daśa-vikalpa-vikṣepa);* (a) is expounded in the *Madhyāntavibhāga,* ch. I, and (b) in the *Mahāyānasūtrālaṁkāra* (XI, k. 77), *Mahāyānasaṁgraha* (ch. Ill, T. 1594, vol. XXXI, p. 140a), and *Abhidharmasamuccaya* (T. 1605, vol. XXXI, p. 692c). The *Yogāvatāra* corresponds to the *Mahāyānasūtrālaṁkāra,* ch. XIV. The *Trikālaparīkṣā* is based upon the *Vākyapadīya,* III, xiv (*Sambandhasamuddeśa*) (See Frauwallner [12]).

Thus, Dignāga took full advantage of the relevant works of his predecessors, Buddhist or non-Buddhists, which proved to be the foundation of the creative development of his own views and in the process of composing his final text: the *Pramāṇasamuccaya with his own commentary* (*Vṛtti*) on the one hand and ruthlessly refuting his adversaries on the other. Here I try to explain in brief Dignāga's innovative radical ideas, which structure the design of his present text within the epistemological-logical-semantic conceptual and categorial framework. To begin with, he designed his innovative *pramāṇa*-theory, which he engineered how to establish the formulation of a *pramāṇa*-doctrine (*pramāṇavyavasthā*). To clarify his *pramāṇa*-epistemology, he presents a radical dictum as mentioned above: *pramāṇādhinaḥ prameyādhigamaḥ*, meaning: "the acquisition of a new knowledge of a targeted object is based on the means of knowledge (*pramāṇa*)." This is radically opposite to other non-Buddhist schools of *pramāṇa*-theories whose epistemological dictum is: *prameyādhinaḥ pramāṇasiddhiḥ*, meaning: "it is the object of knowledge (*prameya*), which determines the means of knowledge (*pramāṇa*)" as, for example, we find in Nyāya epistemology. Dignāga's this strategy has a grand purpose for clear and genuine way of understanding the *pramāṇa*-theories, which is the method of the Buddha who himself is a wise one in the matter of the ultimate *pramāṇa*-expertise (*pramāṇa-bhūta*).

Again, Dignāga divides *Pramāṇasamuccaya* into six chapters with his own commentary (*Vṛtti*), which categorizes into four broad integrated areas, namely, (i) the problems of perception (*pratyakṣa*), i.e. the theory of new knowledge in the first chapter; (ii) the problems of logic (*anumāna*) in four chapters – two, three, four, and six; and (iii) the problems of semantics – nature, function, communication, and word-meaning (*śabda-artha*) in respect of language (containing refutation of the ontological status of universal) – which is technically called *anyāpoha*-method in strategy (i.e. double negation theory) considered to be not different from inference (*anumāna*). Dignāga presents these chapters in a systematic manner of exposition, radical innovative ideas, powerful arguments to establish his position, and critical examination and refutation of his non-Buddhist opponents (Nyāya, Vaiśeṣika, Sāṁkhya, and Mīmāṁsā whose ideas are based on postulations) including Buddhist Vasubandhu's *Vādavidhi* (see chapter I for details) for the reasons that their different assumptions and theories create mutually conflicting situations, especially in respect of the nature (*svarūpa*), number (*saṁkhyā*), object (*viṣaya, gocara*) and result (*phala*) of the *pramāṇa*-epistemology, logic, and semantics. In this context, Hattori [30, 76, n. 1.9] explains Dignāga's four pointed views:

> Dignāga's theory is unique on each of these four points: (1) He recognizes perception (*pratyakṣa*) and inference (*anumāna*) as the only two means of cognition, and does not admit verbal testimony (*śabda*), identification (*upamāna*), etc. as independent means of cognition; see below, n. 1.11; (2) He characterizes perception as "being free from conceptual construction" (*kalpanāpodha*), and does not recognize determinate perception (*savikalpaka-pratyakṣa*) as a kind of perception; see below, n. 1.15; (3) He sharply distinguishes the particular (*svalakṣaṇa*) and the universal (*sāmānyalakṣaṇa*), which are respectively the objects of perception and inference. He denies the reality either of the universal as an independent entity or of the particular as qualified by the universal; see below, n. 1.14; (4) Rejecting the realist's distinction between the means and the result of cognition, he establishes the theory of nondistinction between the two; see below, n. 1.55.

Dignāga, and Dharmakīrti on Perception

Note that Dignāga's radical perception-theory necessarily requires to be clearly understood with respect to its own conditions, which give rise to eventual perception in a natural process governed by the universal law of dependent arising on the one hand and the mind's immediate creativity to unify the series of non-eternal and non-substantial unique cognitive events/awarenesses in the form of a continuant, which in turn gives rise to a particular concept or a class, judgment, or thought, which is structured in a static spatio-temporal form on the other. In the process-philosophy framework, it is a continuing process of the principle of 'conditions and conditioning;' in other words, every moment

of reality is constituted by multiple homogeneous conditions, which in the next duration-less eventual moment change into a new set of homogeneous conditions on the model of a continuously flowing river. In this way, the mindless nature's dynamics continues going. But when the human mind's creative activity under ignorance structures the spatio-temporal formation, the conventional perspective of the same dynamic nature's real world becomes a man's phenomenal world. This generates two forms of reality and truth – Ultimate truth (*paramārthasat, dravyasat*) and conventional truth (*saṁvṛttisat, prajñaptisat*); the latter is laden with the unreal universal characteristics in contrary to the Nyāya view of the ontological status of universe. This is a critical realist Sautrāntika's view established in Vasubandhu's *Abhidharmakośa-bhāṣya* by refuting the Sarvāstivāda–Vaibhāṣika's form of realism in the *Abhidharmakośa-kārikā*, which maintains seventy-five elements of existence comprising of three non-conditioned (*asaṁskṛta-dharma*) and seventy-two conditioned (*saṁskṛta-dharma*), which are reduced to forty-three and the remaining thirty-two rejected by Sautrāntika. Further, whereas the Sarvāstivāda–Vaibhāṣika interprets a moment with four stages (origin/*utpatti*, duration/*sthiti*, degeneration/*jarā*, and destruction/*vināśa*), the Sautrāntika interprets a moment as 'without duration and degeneration,' and maintains simultaneity of origin and destruction, that means 'a *dharmic* moment disappears as soon as appears' (*yatraiva utpattiḥ tatraive vināśaḥ, Abhidharmakośa-bhāṣya-vyākhyā* of Yaśomitra; see *Abhidharmakośa-bhāṣya- vyākhyā*).

Against this background, the Sautrāntika as a radical realist explains the cognitive process, which starts with the interaction between an external physical object (*bāhyārtha*) and a sensory faculty, say eyes, resulting in a pure eventual sensory awareness, i.e. mere sensation, without any conceptual structure, which is considered by the Sautrāntika a type of representation of the dynamic physical object. Subsequently, this presentation is believed by the mind as an external object. Moreover, this interaction generates, within a cognitive field, a fluxional series of data or information, each of which is passed in the mode of an image on to the passive mind. Up to this level, everything is natural (i.e. *prakṛti* based). Next, being a radical realist, the Sautrāntika interprets that there is a resemblance (*sārūpya*) between the two sides, which has the direct pragmatic value. But when the series of unique but homogeneous eventual sensations are not discriminated separately by the mind because of its incapacity, these sensations are naturally converted into a continuant, which in turn is converted into a concept, which is further identified with a specific matching universal. This cognitive process still continues into the domain of language of a person who has the capacity of linguistic expression, which is rooted in the notion of conceptual universal, which in turn falsely or by means of superimposition denotes the targeted external object. In the same continuation, the concerned person's natural capacity of mental creativity gets activated in the mode of logical reasoning, good or bad. Thus, the psychological-cum-logical human mind, in diversified and conflicting ways, goes to any extent of mentally constructed beliefs, arguments, judgments, and biases far away from the ultimate truth. This is the conventional level of truth (*saṁvṛtti*) in this very world. This conventional world (*saṁvṛtti*) is in some contexts pragmatically factual (*tathya-saṁvṛtti*) as in the case of a jar containing water which can quench the thirst, but in some other contexts it may be erroneous or mistaken thinking (*mithyā-saṁvṛtti*) when a thirsty man sees water at a distance in place of a mirage in the desert and believes that it will quench his thirst, but when he reaches there, he is disillusioned. Note that the Sautrāntika perspective of realism goes in favour of the conventional truth.

But for Vasubandhu, in the schema of the Sautrāntika realism, there is an interaction between the external world (*bāhyārtha*) and the external sense, which results in the generation of the sensory data and then subsequently the inner mind comes into play of the process. However, ultimately Vasubandhu was not satisfied with Sautrāntika realism and its representationalism for various reasons. Let us know the meaning of its representationalism, which is appropriately explained by D. N. Shastri [38, 41]:

> According to this theory, external objects are not apprehended directly and immediately, but through the cognitions of these objects. The objects transfer their forms to their cognitions, and the cognitions, having thus acquired the forms of the external objects, become their representatives. We have thus a representative perception of objects, and

not a direct one. Hence the theory is called representationism. External objects, not being perceived directly, are only inferred from their cognitions to which they impart their forms. Orthodox Indian writers, in their compendia of philosophical systems, have ascribed this theory to the Buddhist Sautrāntika school.

Further, at this stage, Vasubandhu thinks to abandon the Sautrāntika perspective and move to Mahāyāna Yogācāra–Vijñānavāda. However, it is most important to explore the inner world of the problematic mind, which has double roles: first, it creates the diversified complex phenomena falsely considered to be the ultimate reality, which leads to bondage in the case of the cycle of birth-death-rebirth (*saṁsāra*) because of which there is no possibility of eliminating the suffering (*duḥkha-nivṛtti*) and second, when the mind becomes self-reflexive about its own problematic nature, it decides to purify itself from the bonding defilements and ignorance (cf. *kleśāvaraṇa* and *jñeyāvaraṇa*) by treading the Buddha's path of concentration (Pali *jhāna*, Skt. *dhyāna*), purification of mind and morality. Nevertheless, since the Sautrāntika external realism has the severe tendency of attachment to the external world, Vasubandhu sees an opportunity in the Mahāyāna Yogācāra–Vijñānavāda tradition of Asaṅga to establish the path of detachment. For this reason, he starts working on his new radical project, which aims at proving the external world as mere phenomena (*vijñaptimātra*) in his text *Vijñaptimātratāsiddhi* containing two tracts, namely, *Viṁśatikā* which refutes the theory of external realism and *Triṁśikā* which psychologically transforms the mind and establishes the doctrine of phenomenalism or a variety of idealism which steers clear the path of soteriological freedom (*duḥkha-nivṛtti*, *nirvāṇa*), but for some it is interpreted as subjective idealism comparing to Berkeley which I do not accept.

With this brief background, it would be beneficial if one discusses at least in brief the radical *pramāṇa*-epistemology of the theory of perception as found in Dignāga's *Pramāṇasamuccaya*-(*Vṛtti*) and his celebrated commentator Dharmakīrt's *Pramāṇavārttika*, *Nyāyabindu*, and *Hetubindu* with lots of revisions and elaborations of Dignāga's ideas along with his own innovative ideas. As usual, following the Buddha and his immediate predecessor Vasubandhu, Dignāga is radical in limiting to only two exclusive means of knowledge on logical ground, that is, perception (*pratyakṣa*) and inference (*anumāna*) and respectively their two exclusive objects of knowledge, that is, (i) self-defined structureless particular object (*sva-lakṣaṇa*) which marks pure sensation (*saṁvedana*) as perception without any conceptual construction and expressibility (*nirvikalpaka*, *avyapyadeśya*), and (ii) the universal as knowable (*sāmānya-lakṣaṇa*) which marks its general characteristic as in the case of colourness (*varṇatva*) by means of the creative activity of the mind. As I understand, a particular spatio-temporally extensionless sensation is a moment, which is the causal product of a cognitive process (*pratyakṣa-pramāṇa*) and it is also considered an object of direct cognition (*pratyakṣa-jñāna*), awareness, or experience. Since it is durationless, it disappears as soon as it appears, it is not grasped by the mind at the same moment even though its operation is so quick so that it can superimpose (*yojanā*) its conceptual structures (*kalpanā*) like judgment, general characteristics or categories like proper name (*yadṛcchā-śabda*), genus-words (*jāti-śabda*, common nouns), quality-words (*guṇa-śabda*, adjectives), action-words (*kriyā-śabda*, verbal nouns), and substance-words (*dravya-śabda*). In this elaboration of the above characteristics, both concepts and their corresponding words are mutual in application. Thus, on the logical basis, Dignāga precisely defines perception as "perception (*pratyakṣam*) is devoid of (*apoḍham*) mental construction (*kalpanā*) – (*pratyakṣaṁ kalpanā-apoḍham*).

These are the two radical exclusive aspects, particular aspect and general aspect, physically real and mentally unreal respectively, but both of them give rise to radically opposite awarenesses in the forms of particular sensation and general universal so much so that the two are completely incompatible and so cannot occur simultaneously in the same context. This theory is technically termed "*pramāṇa-vyavasthā*." Thus, Dignāga strictly confines to no more than two exclusive means of knowledge (*pramāṇa*) and two exclusive objects of knowledge unlike many other schools of thought, particularly the naïve realist Nyāya–Vaiśeṣika views of universal (*Pramāṇavārttika-bhāṣya*: *na hi sva-sāmānya-lakṣaṇābhyām anyat prameyam asti*. – quoted in Hattori [30, 79, n. 1.14]). In the

same vein, Dignāga approves that by the rule of nature *sva-lakṣaṇa* as a knowable object (*viṣaya, prameya*) is equated with direct perception (*pratyakṣa*) and by the similar rule *sāmānya-lakṣaṇa* as a knowable object (*viṣaya, prameya*) is equated with the indirect way of knowing (*anumāna*), i. e. in the case of logical reasoning. (Cf. *svalakṣaṇa-viṣaya-niyataṁ pratyakṣaṁ, sāmānya-lakṣaṇa-viṣaya-niyatam anumānam*. [Ibid.]. Further, in another way, those non-Buddhist systems whose *pramāṇa*-theories, say, Nyāya system with four means of knowledge (*pratyakṣa, anumāna, upamāna,* and *śabda*), which maintains that the same knowable object (*prameya*) can be cognized by anyone of them. This *pramāṇa*-theory is technically termed "*pramāṇa-samplava*."

Dharmakīrti is a celebrated commentator of Dignāga. He widely shares the innovative ideas and methods of Vasubandhu and Dignāga and at the same time in many ways, he maintains his revisionary approach towards Dignāga. Dharmakīrti, both explicitly and implicitly, maintains his doctrinal principles of (i) anti-realism, i.e. rejection of substantialist Nyāya variety of realism; (ii) contrast between the causal dynamics of the ontological real (*sva-lakṣaṇa*) and the conceptual universal, thought, and language (*sāmānya-lakṣaṇa*); (iii) the Sautrāntika form of ubiquitous fluxional momentariness, duality of external and internal worlds, and representationalism; (iv) Yogācāra idealism or phenomenalism or mind-only theory; (v) fluxional nature of consciousness giving rise to the phenomena of experience and awareness, falsely taken as a static self; and (vi) soteriological liberation based on the realization of selflessness. Hattori [30, 80, n. 1.14] summarizes the structure of Dharmakīrti's system of thought in his own way in the following passage:

> Dharmakīrti sets up the following criteria to distinguish *sva-lakṣaṇa* and *sāmānya-lakṣaṇa: sva-laksana* (a) has a power to produce effects (*artha-kriyāśakti*), (b) is specific (*asadṛśa*), (c) is not denotable by a word (*śabdasyāviṣayaḥ*), and (d) is apprehensible without depending upon other factors such as verbal conventions, while *sāmānya-lakṣaṇa* (a) has no power to produce effects, (b) is common to many things, (c) is denotable by a word, and (d) is not apprehensible without depending upon other factors such as verbal conventions; see *PV* [*Pramāṇavārttika*], III, 1-2. . . .
> Dharmakīrti adds further detailed discussions to prove the unreality of *sāmānya*, and states that *sva- lakṣaṇa* alone is the object to be cognized in the ultimate sense; see *ibid.*, Ill, 53d: *meyaṁ tv ekaṁ sva-lakṣaṇa.* That there are two sorts of *prameya* implies that *sva-lakṣaṇa* is apprehended in two ways, as it is *(sva-rūpeṇa)* and as something other than itself *(para-rūpeṇa),* but not that there is real *sāmānya* apart from *sva-lakṣaṇa.* Thus, the distinction between *sva-lakṣaṇa* and *sāmānya-lakṣaṇa* is the result of a changed perspective; see *ibid.,* Ill, 54cd: *tasya sva-para-rūpābhyāṁ gater meya-dvayaṁ matam.*

It is most significant for our purpose in this context is to quote Dharmakīrti's radically explicit and powerful doctrine of causality (*arthakriyā*), which marks the most significant criterion of reality and proves to be the foundation for the establishment of many ontological and epistemological doctrines. Nagatomi [42, 31–32; quoted in [9, 66], explains the double meanings of *arthakriyā*:

> 1. In its ontological sense, it means causal efficacy. In this sense, *arthakriyā* is a criterion of reality. Dharmakīrti says: "That which is able to perform a function exists ultimately." Only objects able to participate causally in the production of other phenomena are real.
> 2. In its epistemological sense, *arthakriyā* means to fulfill a practical purpose. As Dharmakīrti says in *Drop of Reasoning* [*Nyāyabindu*]: "Since correct [that is, valid] cognition is a prerequisite for achieving all human purposes (*artha, don*), I shall explain it." Valid cognitions correctly identify objects and provide a cognitive basis for our successful activities. Real objects are called *artha* because they are the aim of practical activities such as cooking and burning. *Artha* are not objects of theoretical knowledge, but practical objects. They are to be known in terms of whether they affect us positively or negatively.

Dignāga and Dharmakīrti on Inductive and Deductive Reasonings

Some modern scholars may hold their opinions that logical reasoning is more pragmatically meaningful and useful than the theory of the structureless ultimate reality and its private perception or pure sensation. But for the Buddhists, the *pramāṇa*-epistemology is greatly purposeful in life. Nevertheless, it is interesting to know that two radical and innovative logical thinkers – Nāgārjuna and Vasubandhu – have cast their wide influences on Dignāga who in turn proved to be a much more radical and innovative thinker and so he has founded first a new highly systematic formulation of logic of both varieties, namely, inductive reasoning (*svārthānumāna*) and deductive reasoning (*parārthānumāna*), and two other new theories, namely, "the theory of 'pervasion' (*vyāpti*) of probans by probandum, which guarantees the successful proof or inference, and the semantic theory of 'exclusion' (*apoha*), a similar kind of inferential logic, according to which a word expresses its referent indirectly by excluding the contemporary set of the referent." [27, 8]. In the same vein Katsura [*Ibid*.] observes:

> The reason why Dignāga is called the 'Father of New Logic' is that he was the first Indian logician to combine and systematize the two different traditions of logic in India, viz. the tradition of debate (*vāda*) through the five-membered proof (*pañcāvayava*) and that of epistemology which was focused upon the valid means/sources of knowledge (*pramāṇa*). Unlike his successor Dharmakīrti, Dignāga does not seem to have been much interested in doctrinal debates. Rather he appears to have tried to establish a new system of logic which can be utilized by philosophers of any school and with any doctrinal belief or metaphysical conviction, whether they are Buddhists or non-Buddhists.

In Dignāga's process philosophy, the *Pramāṇasamuccaya* deals with different types of process mechanism, broadly in two exclusive categories, namely, perceptual process and inferential process. The latter has three different but interrelated processes, thus in total there are four modes of process mechanism. On the one hand, the first one, i.e. perception as sensation arising from the operation of a sense faculty, is received in the direct and conceptually structureless form, but the remaining three on the other hand are apprehended through conceptually structured through general thought processes, namely, (i) Process of Inductive Reasoning (*svārtha-anumāna*: inference-for-oneself, a private inferential cognition; (ii) Process of Deductive Reasoning (*parārtha-anumāna*), a communication to another; and (iii) Process of Linguistic Communication or the Semantic Theory of Exclusion (*anyāpoha*, exclusion of the other). The first two are the separate two modes of inferential logic, and the third one is indirectly structured (in terms of the linguistic realm: *śabda-artha*, word-meaning) on the pattern of inferential logic. These three have their own conceptual structures, which are required to be discussed separately, although they are considered to belong to the same family. Now, it is the right time to discuss these modes of process:

(1) *Process of Perception* (*Pratyakṣa*)

To analyze and understand the process of perception for a private person, it is important to know the nature of the physical world and the constitution of the human being, mainly consisting of the external physical body endowed with external five operational sense faculties (eyes, nose, ears, tongue, and skin) and their supply of different kinds of information or data, in the process of mutual interaction. These information or data are produced in the following forms, depending in the contexts, separately or in combinations: colour and form (*rūpa*), smell (*gandha*), sound (*śabda*), taste (*rasa*), and touch (*sparśa*). Subsequently, in natural manner, they are passed on to the internal mental faculty, which first grasps them passively, but thereafter immediately it becomes operational to conceptually structure these data depending on the situation. The process of perception and the resultant sensation, which is the product of multiple active homogeneous conditions, all of which in unified manner give rise to sensory experience but are immediately taken over by the operation of mind to superimpose

conceptual judgment and make active a process of thought, which is imbued with Yogācāra critique of realism to pave the way for formulations of the eight modes of mental/ phenomenal/ psychological/ experiential consciousness (*vijñāna*) in the Yogācāra system – five kinds of *pravṛtti-vijñāna*, one *mano-vijñāna*, one *kliṣṭa-manasa*, and one *ālaya-vijñāna*, which are divided into two categories, diachronic and synchronic mechanisms. These principles in some or other underly the epistemological, inductive reasoning, and semantic character of language. But these are not applicable to the naked sensation. In this sense, it is exclusively separate from the analysis of conceptual and universal formations.

(2) *Process of Reasonings* (*Svārthānumāna* and *Parārthānumāna*)

Inference (*anumāna*) is an indirect and general way of knowing the general attributes (*sāmānyalakṣaṇa*) in contrast to a direct way of knowing the peculiar unique attributes (*svalakṣaṇa*) of the fluxional things through which a cognizer comes to know a hidden second kind of property, say, a body of fire, possessed in the same locus. In this case, both properties are general in characteristics. This process can be understood like this: From the observed smoke located in the mountain to the hidden fire located in the same mountain. But there are certain questions: What kind of relationship is between the smoke and the fire? Is there any cause–effect relationship between them in Dignāga? What is the nature of pervasion (*vyāpti*) between them? Is the observation of the so-called legitimate evidence sufficient for an inferential knowledge? What are the criteria of the so-called legitimate evidence (smoke)? For Dignāga, all such questions have already been raised and answered in one or other way from Buddhist or non-Buddhist thinkers.

Now it is necessary for Dignāga to answer these questions containing the epistemological and logical concepts and issues to be utilized for rule-based engagement in debates, inductive reasoning, deductive reasoning, and semantic theory of language. It is true that he has been throughout innovative, creative, and systematic in his writings, especially in his final mature text *Pramāṅasamuccaya* with *Svavṛtti*, but he has not solved all sorts of key issues, some of which are listed below, which are mostly properly managed by his celebrated commentator Dharmakīrti. Hayes [19] and Katsura (in his various articles; see bibliography) tried to explain Dignāga's response to these central issues, but they find him not satisfactory in many cases. The following logical terms and concepts will be explained while discussing Dignāga's theory of the Inductive Logic:

(i) Observation (*darśana*) of legitimate evidence as sign (*liṅga*, *hetu*), a property (*dharma*) located in the property-possessor/locus/object of inference (*pakṣa*, *dharmin*);
(ii) Purpose to formulate three criteria of the sign (*trairūpya-liṅga*) to ascertain a valid knowledge and the use of the restrictive (*avadhāraṇa*) particle 'only' ('*eva*');
(iii) The subject of property (*sādhyadharma*, *liṅgin*) located in the property-possessor (*pakṣa*, *dharmin*);
(iv) The nature of relationship of (*sambandha*) among *liṅga*, *liṅgin*, and *pakṣa*;
(v) The nature of pervasion (*vyāpti*) as relationaship;
(vi) The cause-effect relationship;
(vii) The principles of inductive reasoning, namely, *anvaya* and *vyatireka*, applied to both inductive reasoning and the semantic theory of language.

It is to be noted that Dignāga and his predecessors are very fond of using the term 'observation' in different contexts. Hayes [19, 240–241] explains 'observations' (*darśana*) in the present situation as follows:

> . . . Dignāga concludes that the presence of awareness of a sign, which awareness is a key element in inference, goes without saying once one has mentioned the sign itself. It is noteworthy that in most discussions of matters of logic and epistemology in classical Indian philosophy, psychological issues are never far in the background and are often brought into the foreground for special attention. In contrast to some trends in modem

> Western thought, where there has been a concentrated effort on the part of some to avoid psychologism, the classical Indians were relatively unconcerned with drawing careful boundaries between purely logical and purely psychological questions.

Moreover, in the second chapter of the *Pramāṇasamuccaya* with its *Svavṛtti*, Dignāga divides the means of inference (*anumāna*) into two separate modes – (i) Inductive Reasoning or the means of inferential knowledge through the process of inference for oneself, that is, for an interested person (*svārthānumāna*) and (ii) Deductive Reasoning or the Syllogistic Reasoning (*parārthānumāna*), which aims at communicating or explaining this new knowledge with its process to a public person who has the ground of the common language and the potentiality to understand the whole logical process and states of affairs or fact involved in this. The Reductive Reasoning begins with the observation of a logical evidence or sign (*hetu*, *liṅga*) by a person who is privately aware of the same and takes it for granted on the basis of the past experiences and the logical reasoning with sufficient conditions in respect of the observed sign, which is located in a genuine locus (*pakṣa*), which is a principal, foremost, and forerunner factor of the inferential process, not on the basis of unwarranted factors, in the general way. On the ground of the evidential sign being endowed with specific characteristic or property (*dharma*), the cognizer discerns an inferential object (*liṅgin*) endowed with a specific property, which is located in the same locus, which is the property-possessor (*dharmin*, *pakṣa*) of both properties, which qualify the property-possessor. This is the state of affairs of existential situation. But this is not sufficient for the sign to guarantee certainty to complete the process of inference and ensue the resultant knowledge. For this reason, following his predecessors, Dignāga formulates three criteria/ characteristics/ conditions (*trairūpya-liṅga*) to be fulfilled by the evidential sign to be successful for the acquisition of new knowledge. But there is still certain vagueness about the epistemological and logical meanings of observation and the relationship among the integrated organs of the inferential process. The Buddhist logicians do make efforts to overcome these problems by innovating different terminologies to mark a kind of relationship in case of different thinkers such as Vasubandhu's concept of not-without-which (*a-vinā-bhāva*; i.e. inseparable), Dignāga's concept of pervasion (*vyāpti*), and Dharmakīrti's concept of essential-relationship (*svabhāva-pratibandha*). The latter is the most successful term in explaining the concept of relationship (*sambandha*) along with the cause-effect relationship.

The *Trairūpya* Formulae

It is well known that there were a number of different versions of the *Trairūpya* Formulae in pre-Dignāga period. "The most standard version seems to be (i) *pakṣadharmatva*, (ii) *sapakṣe sattvam*, and (iii) *vipakṣe 'sattvam*. . . . however, [elsewhere in PS-Vṛtti, it indicates] that Dignāga intended to insert the restrictive particle '*eva*' in the formulae of the second and the third characteristics" [26, 246]. In another article, Katsura (PS 4.6); see [29, 2004, 137] in brief, maintains that Dignāga's *trairūpya* formulae can be summarized in three different terms, namely, *pakṣadharmatva*, *anvaya*, and *vyatireka*., which can be explained as follows:

(i) *Pakṣadharmatva*

According to PS (V) (4.6) [2], the beginning of the process of Inductive Reasoning starts with the perceptible observation (*darśana*) with presence, wholly or partly, of the evidential sign (*liṅga*, *hetu*, e.g. smoke) rising from, or seen located in the 'object to be inferred' (*anumeya*, *pakṣa*, e.g. mountain). In this case, alternatively, it is said that there is a compatible relationship between the sign's property (*dharma*, *hetu*) and the property-possessor the 'object to be inferred' (*dharmin*), because the sign (*liṅga*, *hetu*) qualifies the inferable (*anumeya*) in whose location the second property, e.g. fire (*liṅgin*, *sādhyadharma*) is also seriously expected as per the past experiences of the cognizer somewhere else on the logical basis that there is an invariable relationship (*a-vinā-bhāva* in Vasubandhu and *vyāpti* in Dignāga) between the sign (e.g. smoke) and the subject of inference (e.g. fire). This fulfils the first

condition or criterion of the three-criteria-sign as a valid inferential sign (*pakṣadharmatva*). The second point is that to strengthen his reasoning, the cognizer recalls his previous experiences of the evidential sign, e.g. smoke, on the same pattern (*tat-tulya*) in a kitchen somewhere else, but its absence will be found in the 'absence of the property to be inferred' (*asat*, e.g. a lake). This marks the confirmation of the second criterion (*anvaya* = *sapakṣa*, a positive concomitance, similar association) on the one hand, and on the other, the third criterion (*vyatireka* = *vipakṣa*, viz. negative concomitance, *vipakṣa*, dissimilar dissociation). Katsura [29, 137] summarizes the preceding passage: "In short, an inferential mark possessing the three characteristics (*pakṣadharmatva*, *anvaya* and *vyatireka*) can produce the ascertainment of a certain state of affairs regarding an object to be inferred."

(ii) *Roles of Anvaya* and *Vyatireka*

It is a common knowledge that every modern scholar of Buddhist logic follows the article of George Cardona [8] – "On reasoning from Anvaya and Vyatireka in Early Advaita" – who designates these terms as "Indian Principle of Inductive Reasoning." The following significant passage is highly useful for my present article, which is quoted by Katsura [26, 249–250]:

> Indian thinkers have used a mode of reasoning that involves the related presence (*anvaya* 'continued presence') and absence (*vyatireka* ['continued absence']) of entities as follows:
>
> (1) a. When X occurs, Y occurs.
> b. When X is absent, Y is absent.
> (2) a. When X occurs, Y is absent.
> b. When X is absent, Y occurs.
>
> If (1a, b) hold in all instances for X and Y, so that these are shown consistently to occur together, one is entitled to say that a particular relation obtains between the two. Either (1a) or (1b) alone will not justify this, and a claim made on the basis of either can be falsified by showing that (2a) or (2b) holds. One relation that can be established by (1) is that X is a cause of Y. A special instance of the cause-effect relation involves the use of given speech units and the understanding by a hearer of given meanings. If (1a, b) hold, the speech unit in question is considered the cause of one's comprehending a meaning, which is attributed to that speech element.

In the same continuation, Katsura [29, 137] quotes and translates a statement made by Dignāga (PS 4.6, borrowed from his *Nyāyamukha* V.13), which highlights the contents of the 'inference for others' (*parārthānumāna*), which shows the integrated relation of the two modes of logical reasoning:

> *svaniścayavad anyeṣāṁ niścayotpādanecchayā / pakṣadharmatvasambandhasādhyokter anyavarjanam //* [29, 137, n. 6]
>
> Translation: "[In 'inference for others' (*parārthānumāna*, 'proof' in short, on the other hand,] with a desire to produce for others the same ascertainment (*niścaya*) as we ourselves have obtained, we refer to (1) [a reason's (*hetu*)] being a property of the topic (*pakṣa*) of a proposition (*pakṣadharmatva*), (2) [its inseparable] relation (*sambandha*) [with that which is to be proved] and (3) the [proposition] to be proved (*sādhya*). Other items should be excluded [from the members of a proof]"

Katsura [29, 138] makes another very significant comment on Dignāga's statement: "Thus the purpose of a logical proof (*parārthānumāna*) is to produce in the opponent the same kind of ascertainment that is obtained by the proponent through an inference (*svārthānumāna*). This indicates a close parallelism between an inference and a proof." Unlike the process of inductive reasoning based on the *trairūpya* formulae ascertaining the new valid knowledge, the deductive reasoning is a logical proof consisting of propositions, which aims at the communication of this newly acquisitioned

valid knowledge to a desired person endowed with the required understanding. As a matter of fact, this process is a repetition of the *trairūpya* formulae by means of recollection by the speaker who transfers the whole inductive process to the mind of the hearer through the application of the general rules, because this repetition is not a particular process (*svārthānumāna*). Thus, the logical proof (*parārthānumāna*) is taken in a metaphorical sense (*upacāra*).

(3) *The Semantic Theory and Method of "Other's Exclusion" (Anyāpoha)*

Dignāga on Anyāpoha

In this section, I discuss the semantic theory of exclusion of others (*anyāpoha*) established by Dignāga and his celebrated commentator Dharmakīrti. The *anyāpoha*-theory is uniquely the most innovative and radical contribution to the Indian epistemology, logic, and language in general and specifically in Buddhism. He develops this theory in the Fifth Chapter of the his *Pramāṇasamuccaya*(*-vṛtti*), titled "*Anyāpoha-pariccheda*," that is, a "semantic theory of other's exclusion" or a "Buddhist theory of verbal cognition," which aims at solving the complex problems of the substantialist ontological status of the universal (*sāmānya, jāti*) and to investigate into the problems of word-meaning (*śabda-artha*), which were created by the external/objective realists like Nyāya–Vaiśeṣika and Mīmāṁsā who maintain that a word directly refers/denotates an external/objective reality whether individual like tree with spatio-temporal structure or universal like treeness inherent in all trees. Thus, a word 'tree' gets its identity of a natural class 'treeness' through universal (*sāmānya, jāti*), which qualifies all individual trees. This necessary natural relationship between the two is maintained by necessary inherence-relation (*samavāya-sambandha*). In this natural way, the individual tree's structure is defined. Now the question is how one indivisible universal inseparably inheres in multiple numbers of trees. This complex issue raises numerous other problematic issues. For this reason, such ontological categories (*padārtha*) – for example, in Nyāya–Vaiśeṣika naïve realism, according to the Buddhist logicians like Dignāga and Dharmakīrti – are based on postulations and so they are unreal, unknowable, and non-existent. Hayes [19, 183] succinctly presents below Dignāga's critique of universal (*sāmānya, jāti*):

> Diṅnāga argues that such an entity is logically impossible on the grounds that the two predicates "indivisible" and "resident in a plurality of individuals" are incompatible. The full line of reasoning goes as follows. A universal's residence in an individual must be either complete or partial, that is, either the entire universal resides in an individual or only part of it does. If a universal **U** resides in its entirety in given individual **u1**, then it does not reside at all in individuals **u2**, **u3**, **u4**, . . . **un** and thus fails to be resident in a plurality of individuals. If on the other hand the universal is conceived as residing only partially in each of its individual instances, then it loses its indivisibility, for it then has as many internal divisions as there are individuals in which it supposedly resides.

Further, the verbal cognition (*śabda*) is considered by many non-Buddhist schools as an authentic and valid means of knowledge (*śabda-pramāṇa*), which Dignāga rejects as an independent *pramāṇa*, not different from inference (*anumāna*) and so the process of verbal cognition (*śabda*) is very much similar to the form of an inferential process. We have seen in the above discussion that as per the process philosophy, opposite to the substantialist theories of the non-Buddhists, Dignāga maintains only two *pramāṇas* – direct perceptual knowledge as sensory perception (i.e. *pratyakṣa* as *saṁvedana*) and indirect inferential knowledge (*anumāna*). In the former case – the object of knowing is self-defined, particular, eventual, structureless, inexpressible ontological reality (*svalakṣaṇa*), and just the opposite in the case of non-Buddhists – the object of knowing is characteristically general and conceptually structured (*sāmānyalakṣaṇa*). This position marks the exclusive duality of real and conceptual. Thus, we have earlier seen that in the backdrop of *pratyakṣa* and *anumāna*, *svalakṣaṇa* and *sāmānyalakṣaṇa*, peculiar attribute and general attribute, and sensation and inference, which are

jointly exhaustive, and so there is no third independent means or object of knowledge. On this line, Dignāga's entire theory of *pramāṇa*-epistemology, logic, and semantics in his *Pramāṇasamuccaya*(-*vṛtti*) has developed. Further, denying the opponents' claims that the verbal cognition is acquired from the linguistic symbol or sign (*śabda*) and is an independent means of knowledge, Dignāga in the very first *kārikā* of PS, V (quoted in the *Tattvasaṁgraha-pañjikā*, mentioned in Hattori [30, 78, n. 1,12] asserts his position:

> *na pramāṇāntaraṁ śābdam anumānāt tathā hi tat /*
> *kṛtakatvādivat svārtham anyāpohena bhāṣate //*
> Translation [32, 2000, 139]: That [means of cognition] which is based on word in not [an independent] means of cognition other than inference. Because it [viz., a word] expresses its own object through the exclusion of the other [things], just as [inferential mark (*liṅga*)] "*kṛtakatva*" (producedness) or the like [establishes the object to be proved through the exclusion of what is not a possessor of that inferential mark].

Dignāga's theory of "other's exclusion' (*anya-apoha, anya-vyāvṛtti*) is not a simple doctrinal principle, rather for correctness of meaning, it is a universal method to be necessarily applicable to both unstructured particulars and structured individuals (*vyakti*, like tree or cow) endowed with numerous properties like substance-hood (*dravyatva*) and quality-ness (g*uṇatva*). These individuals, unlike conceptually unstructured particulars, are nothing but the unity of the multiple ontological particulars (*bheda*) like sensations (= *svalakṣaṇa*). Subsequently, the mind's operation superimposes unity on this followed by the creation of various conceptually structured properties or categories (= *sāmānyalakṣaṇa*) like substance-hood (*dravyatva*), quality-ness (*guṇatva*), generality (*jāti*), and relation (*anubandha*). In the inferential process, for example, the move from the observed smoke (*liṅga*) to the hidden inferable fire (*liṅgin*), located in the same compatible locus like mountain, the cognizer's focus is fixed on the specific property, i.e. only a part of the object, of each of the two, even if they have other properties, which cannot be the objects of knowledge in this case. This analysis shows that the process of verbal communication is not different from the process of inference. Note that the entire inferential process involving the conceptually structured components is completed in a general way, which falls in the conceptual domain (*sāmānyalakṣaṇa*). In this process, Dignāga presents two originally remarkable ideas:

(i) Every individual object has multiple properties but we cannot know them in entirety in inferential process and it is also that the remaining properties are not compatible in a specific context; and

(ii) To be semantically precise, it is necessary that the "process of other's exclusion" (*anya-apoha*) is used as a method. It is important to know that this method is being applied throughout by Dignāga in his *Pramāṇasamuccaya*(-*vṛtti*).

On the first point, I quote below a very significant *kārikā* of Dignāga with its explanation by Hattori [30, 91]:

> *dharmiṇo 'neka-rūpasya nendriyāt sarvathā gatiḥ /*
> *svasaṁvedyam anirdeśyaṁ rūpam indriya-gocaraḥ /*
> When one cognizes a pot possessing blue color *(varṇa),* round shape (*saṁsthāna*), and other properties *(dharma),* this cognition is not produced directly by his sense-organ. The properties of an object are to be admitted as the products of conceptual construction. An object comes to be recognized as being of blue color only when it is excluded (*vyāvṛtta*) from non-blue things, and this process of the exclusion from other things is nothing other than conceptual construction. In the same manner, that object comes to be recognized as being of round shape, or as possessing the properties P, Q, etc., according to whether it is excluded from non-round-shaped things, or non-Ps, non-Qs, etc. Thus, many different properties of the object are mentally constructed through these exclusions from other

things, and consequently the object comes to be conceived as the possessor of many properties. By the sense-organ, however, one perceives the object in itself (*svasaṁvedya*) and not in all its aspects (*na sarvathā*), i.e., as a possessor of such and such properties. (Also see Hayes [19, 252]).

Dharmakīrti

I have discussed above that like other Buddhist disciples, Dignāga venerates the Buddha as the possessor of ultimate valid knowledge or wisdom (*pramāṇabhūta*), which underlies his every discourse and practice. In the same vein, Dharmakīrti also accepts in his own way the Buddha's *pramāṇa*-authority in his discourse. For this reason, Dharmakīrti recognizes the significance of justified scriptures. However, in the very beginning of his *Pramāṇavārttika*, chapter I: *Pramāṇasiddhi* (verse 5b), Dharmakīrti expresses his primary concerns following the Buddha's main task of eliminating the suffering of the sentient beings in general and human beings in particular (*duḥkha-nivṛtti*) by means of overcoming the root-motivating causes, namely, passion (*rāga*), hatred (*doṣa*), and intellectual confusion (*moha*). For this purpose, he composes his text to eliminate this confusion (*śāstraṁ mohanivartanam*), which generates ignorance (*avidyā*), which in turn causes suffering (*duḥkha*). According to Dignāga and Dharmakīrti, this inbuilt problem can be overcome only by means of *pramāṇa*-epistemology, logic, and semantics, which are endowed with the possibility of acquiring valod knowledge followed by moral practices. (Also see Chapter III: *Svārthānumānapariccheda*, verses 222–223, on the same issues; [Dunne, [10, 53–54, n. 2]. Further, on the mechanism of perpetuating suffering, Dunne [*Ibid*., 60; also see Gillon15] explains these two verses, which focus on the principal source of suffering, namely, the dogmatic belief in the permanent soul (*satkāyadṛṣṭi*), equivalent to ignorance (*avidyā*) and self-clinging (*ātma-sneha*):

> As I have mentioned earlier, the explicit purpose of Dharmakīrti's philosophy is to free beings from suffering, and when we relate his soteriology with the hierarchy of views discussed above [*Ibid*., 53–54], we can see how soteriological concerns inform Dharmakīrti's philosophical method. On Dharmakirti's view, suffering arises from self-clinging (*ātma-sneha*), a disposition caused by *satkāyadṛṣṭi*, the belief that one's psychological aggregates (*skandha*) are the locus of an *ātman* or absolute self that exists above and beyond those aggregates. Thus, to eliminate suffering, one must eliminate self-clinging, and to eliminate self-clinging, one must eliminate *satkāyadṛṣṭi*.

However, despite being a radical genius thinker, Dharmakīrti not only proves to be extremely difficult for both his commentators and the modern Buddhist thinkers to understand his grammar, style, and intention, because of confusions and circularity in respect of his doctrinal principles, arguments, and methodology. Being himself a victim of these perplexing problems in Dharmakīrti's writings, John Dune [Ibid., 246] makes hard efforts to solve them in his prestigious book and he also gets support from the remarkable summarized observations of Steinkellner [43, 328] as follows:

> Describing this underlying circularity as "conceptual," Steinkellner summarizes it schematically:
> 1. Our ordinary valid cognitions (*pramāṇa*) establish the authority of the Buddha's teaching (*buddha-vacana*),
> 2. the validity of our cognitions (*prāmāṇya*) is understood as their reliability (*avisaṁvāditva*),
> 3. reliability depends on successful activity (*puruṣārtha-siddhi*),
> 4. all human goals are determined by the ultimate goal (*nirvāṇa*),
> 5. the "ultimate goal" is indicated by the Buddha's teaching (*buddha-vacana*).

It is well known to all thinkers of Dignāga and Dharmakīrti that the style of their writings is elliptical, terse, and sparse. About Dharmakīrti's style, there are two very strong negative comments (quoted in

Dunne, 10, 4): (i) Hayes [18, 319): ". . . the tortuous writings of this highly complex thinker." (ii) Hayes and Gillon, [21, 69, n. 1]: "Dharmakīrti's style is so terse that it is not always immediately clear what philosophical points he intends to make." In my opinion, the best method of clear understanding of a text's intention, issues, and development of the argument is to begin at the beginning against the historical backdrop, (i) the Sutta literature containing the Buddha's way of developing and practicing the formulae of the spiritual path resulting in the attainment of the wisdom (*bodhi*) and his discourse (*buddha-vacana*); (ii) the progressive move through the Abhidharma (both Pali and Sanskrit), and to be dependent on the most systematic and scholastic writings in the area of Abhidharma, which contains the encounter between Sarvāstivāda–Vaibhāṣika and Sautrāntika schools, by early Vasubandhu (cf. *Abhidharmakośa-kārikā-bhāṣya*) on the one hand and (iii) on the other, early Mahāyāna Mādhyamika Nāgārjuna, and later Vasubandhu and Asaṅga's Yogācāra tradition, along with their commentators whose interpretations with simplicity make the original texts easier for understanding. John Dunne [10] follows this strategy which helps him understand the *Pramāṇavārttika* of Dharmakīrti through its two early commentators' clear interpretations, namely, Devendrabuddhi and Śākyabuddhi. In continuation, Dunne [*Ibid*., 5] identifies three features of their style of reasoning, which he encountered in the process of his study of these three texts, to make his own expression understandable and explainable: (i) Systematicity or systematic approach, which maximum reduces terseness and confusion; (ii) strategy of correcting inconsistencies and incoherence; and (iii) straightforwardness and bluntness so that no wrongness is made. Two more confusing styles or methods of reasoning of Dharmakīrti are "Hierarchy of Discourse" and "Ascending Scale of Analysis" (also called "Sliding Scale of Analysis"). "Dreyfus notes that the choice here is largely a "pragmatic" one that focuses upon both the audience and the purpose of discussing such issues." [See 9, 99 and 104; also see Dunne, 10, 53]

Now, towards the end, I want to focus on the following three important issues – (1) Dignāga's Lapses and Difference with Dharmakīrti; (2) Dharmakīrti's doctrinal principles and categories; and (3) Dharmakīrti's *pramāṇa*-epistemology.

(1) *Dignāga's Lapses and Difference with Dharmakīrti*

It is well known that Dignāga was accepted by Dharmakīrti as his model genius Buddhist epistemologist and logician, but he found numerous missing crucial issues and questions, which Dignāga should have anticipated for the benefit of his contemporary and next generation thinkers and readers. Since Dignāga was a follower of the Buddha and his process philosophy, he had become a staunch anti-realist and so he was vehemently criticized by the realists like Naiyāyika Uddyotakara and the Mīmāṁsaka Kumārila Bhaṭṭa, who raised highly problematic issues and questions concerning his views. Subsequently, Dharmakīrti, who had become Dignāga's trusted genius commentator, took these problems seriously to solve them and thus he applied two-pronged strategy in order to defend and deeply modify Dignāga's views. For this, he followed a revisionary method for radical reinterpretation of Dignāga's epistemology, logic, and semantics.

Katsura [24] [25] has discussed some crucial lapses, which are committed by Dignāga in these matters. I try to summarize them below:

- Dignāga introduced the idea of 'pervasion' (*vyāpti*) as a foundational inseparable relation between probans (e. g. smoke) and probandum (e.g. fire) for the purpose of 'universal discourse,' which was accepted by all types of logicians. But Dharmakīrti's charge is that Dignāga never explained how this logical relation could be established and justified and how it could be universalized. To overcome these and many such problems, Dharmakīrti innovated the doctrinal principle of essential relation (*svabhāva-pratibandha*), which provides the universal foundation for inferential reasoning. See Katsura [24]
- Dignāga was deeply focused on inductive method through association (*anvaya*) and dissociation (*vyatireka*) formula in order to establish the relationship between *hetu*/*liṅga* and *sādhya*/*liṅgin* on the one hand and on the other between *śabda* and *artha* (its object). [see 24, 139]

In this context, Katsura writes [24, 140]:

> . . . Dignāga is clearly aware of the fact that it is impossible to establish the *anvaya* relation (association, agreement in presence) between a particular linguistic item (or a verbal symbol) and all of its objects, which reflects the core of the difficulty faced by any inductive method. As to the *vyatireka* relation (dissociation, agreement in absence), he seems to believe that it can be established on the basis of mere non-observation (or non-perception, *adarśanamātra*) of a counterexample. In view of Dignāga's general principle of the essential identity between the verbal communication and the inferential process, the above interpretation should not be restricted to the former; the same must apply to the latter. Thus it is clear that Dignāga's theory of pervasion has no strong claim for universality and that it is of a purely hypothetical nature.

- Dignāga does not care for answering the question how to relate the perceptual realm with the conceptual realm. [Ibid., 138]
- In spite of being a significant passage "A name really designates objects qualified by the exclusion of others" (*śabdo 'rthāntaranivṛttiviśiṣṭān eva bhāvān āha*/) (PS, V, Verse 36), which is accepted by the post-Dignāga logicians like Dharmakīrti and Jñānaśrī, Dignāga fails to anticipate this issue to delineate the theory of *apoha*. See Katsura [25, 138]

In the same continuation, Dharmakīrti traces Dignāga's weaknesses in respect of his philosophical programming and raising problematic issues and dealing with them, either he ignorantly did not answer the opponents' questions arising from them or did not answer them appropriately and sufficiently, or neglected the critiques by his opponents. Second, Dharmakīrti adopted revisionary method to modify and elaborate Dignāga's entire system of "*pramāṇa*-epistemology, logic, and semantics" by incorporating his own new ideas in hierarchical order, pragmatism, and strategies. Now, it is very important that we must know Dharmakīrti's new categories, meanings, and their applications in right contexts with effective strategy. Note that the modern thinkers of Dharmakīrti have mixed interpretations, positive and negative in different contexts. I present brief statements on some of these philosophical issues and categories.

Dharmakīrti on Vyāpti and Svabhāva-pratibandha: Dharmakīrti's perceptual and conceptual doctrines are rooted in the nature's laws of causality (*prakṛtyā*) and the facts of conditions. These underly his conceptual framework of the process philosophy, which covers his views on ontology, epistemology, and the nature of mental operations through which perceptual reality (i.e. particulars, *svalakṣaṇa*) and conceptual unreality (universal, *sāmānyalakṣaṇa*) are unified for the development of the conventional perceptual judgments. This marks the pragmatics of ontology, epistemology, and semantics. We can also say that perceptual cognition (*pratyakṣa*) is the root of conceptual cognition (cf. *pratyakṣapṛṣṭhabhāvīvikalpa*). Since the Buddhist process philosophy is developed on the functioning of the Nature (= *prakṛtyā*), Dharmakīrti has grounded philosophical programme in the Nature's lawful systematic functioning. In this system, the principle of causality is continuously active as we find in the Buddha's discovery of the universal law of dependent arising (*pratītyasamutpāda*). This means each event is designated as a dynamic thing, the series of which marks the complex causal conditions of a unique production of a thing and in the same continuation immediate conditioning for the production of the next structureless episodic thing. Thus, we can clearly understand the questions of 'what and 'how' only when we rightly understand the causal mechanism of the dynamic Nature through observation, which, for example, helps us explain the ontology of an individual body of smoke as evidence (*liṅga*, *hetu*) and another individual body of fire (*liṅgin*, *sādhya*) in the common locus (*pakṣa*) and the mutual essential inseparable relationship (*vyāpti*) between the first two. This process is considered endowed with certainty that there is a natural causal relationship between them, which can never be violated. This can be explained as "smoke is the effect of the cause of fire," and so the fire is considered as the pervader (*vyāpaka*) and the smoke as pervaded (*vyāpya*). This assumption pragmatically proves to be valid in this case, because the assumption proves to be pragmatically true in similar cases (*anvaya*, positive concomitance), but the

dissimilar cases (*vyatireka*, negative concomitance) in the same context are ruled out in the sense that the location of the smoke and fire are not found in a lake. The same principle can be justified, in general, limited to only such smoke-fire-pervasion cases. Again, according to Dharmakīrti's new idea, even if one example is found valid in any such individual or instead, a few more such cases for examples would be sufficient for validity. In both cases, they would be supported by the concept of universality. This methodical way of inferring the inferable object rejects the realist Naiyāyika's way of establishing validity by means of repeated observations (*bhūyodarśana*), because the latter is doubtful about the possibility of certainty in the inferential process.

Further, it is interesting to note that *anvaya* and *vyatireka* have implicitly the *vyāpti* characteristics, but they can be explicitly designated as *anvaya-vyāpti* and *vyatireka-vyāpti*. Dunne [10, 28, n. 36] explains these logical concepts:

> My own preference for *anvaya*, when understood to mean *anvayavyāpti*, would be "entailment." This term captures both the metaphorical sense ("following along") and the logical sense (strict or necessary implication) of the term as it was used by *Pramāṇa* Theorists of Dharmakīrti's time and after. For *vyatireka* (when used in the sense of *vyatirekavyāpti*), I would recommend "restriction," since the intention here is to show that occurrences of the predicate are necessarily restricted to occurrences of the evidence. One of the problems with translations that involve the English word "negative" (as in "negative concomitance") is that *vyatireka* is not necessarily stated as a negation. See for example, Dharmakīrti's formulation of *vyatireka* in PVSV [*Pramāṇavārttikasvapajñavṛtti ad* PV [*Pramāṇa*vṛtti]1.1 (G[noli]:2.13: *vyāpasya vā tatraiva bhāvaḥ* (= HB [*Hetubindu*]:2.7-8)." [*Square brackets are mine*.] For HB see [6] and for Gnoli [5].

(2) *Dharmakīrti's Fundamental Principles and Categories*

- Ontological commitment to the most foundational doctrine of momentariness, which marks the Sautrāntika view of momentariness.
- Causal efficiency (*arthakriyāśakti*) of the dynamic reality (*svalakṣaṇa*, particular) as the object of perception (= sensation), which is the root of unreal conceptual universal as the object of inference (*sāmānyalakṣaṇa*) and it is the most basic foundation of *pramāṇa*-epistemology, logic, and semantics for the utilization of acquisition of valid knowledge (*saṁyagjñāna*) and attainment of human values (*puruṣārthasiddhi*), whether desirable or undesirable.
- Pragmatism: The world of actual and the world of conceptual are applicable to the actual state of affairs in the conventional world.
- Integrating the conventional world (*saṁvṛtti*) and the spiritual soteriological liberation (*nirvāṇa*) directly or indirectly.
- Accepting the authority of the scriptures unlike Dignāga's openness in the public domain. (See eight parts of scripture, Dunne [10, 240]
- The integrated trio of (i) causally efficient perceptual reality stimulating (ii) the conceptual in the actual world itself and the conceptual mental construction (*vikalpa*) derived from the actual reality; and (iii) the purposeful perceptual judgment for the universe of discourse based on the natural operation of mind.
- Explaining away the entire epistemological process of Dignāga (*trairūpya* formulae) in general for being hypothetical in nature in respect of the inductive reasoning, which is substituted with the deductive reasoning because every thought is conceptual.
- Theory of *svabhāvapratibandha* (essential connection), an invention of a new logical category, as an alternative of *trairūpya*-conditions based on the inductive approach, in which case the relation of pervasion (*vyāpti*) reveals a hypothetical nature restricted to the actual world.
- *Svabhāva* in *svabhāva-pratibandha* has two different aspects – the potentiality of causal efficiency (*arthakriyāsāmarthya*) of actual existence (*tadutpatti*) and the conceptual identity (*tādātmya*)

between two essentially common individuals, tree (*vṛkṣa*) in the general sense and the oak (*śimśapā*) in specific sense, besides the notion of non-perception (*anupalabdhi*) to replace the ontology of absence-theory (*abhāva*) of the realists. Katsura [25, 141–142] in brief explains the same as follows: "It is most likely that Dharmakīrti was the first to establish the deductive method of logic in India. Further, he introduced the new categories of *hetu*, viz. *kārya* (result), *svabhāva* (essence) and *anupalabdhi* (non-perception). The first two correspond to the two types of *svabhāvapratibandha* recognized by him, viz. *tadutpatti* (causality) and *tādātmya* (identity), while the last one must have been introduced by him in order to replace the preceding incorrect notions about the proof of non-existence (or negative inference) including Dignāga's concept of *adarśanamātra*."

- Finally, Dharmakīrti is known for maintaining confusing style of circularity, which is blamed by prominent modern scholars like Vetter [45], Steinkellner [44], Hayes [20], and Franco [11].

(3) *Dharmakīrti's Pramāṇa-epistemology*

It is very well known that Dharmakīrti faces complex problems from both sides – Buddhist and non-Buddhist epistemologists and logicians, but he offers complex solutions as well, which imply the most problematic ubiquitous mentation, unconscious error (*bhrānti*), unreal fictional universal (*sāmānya*), conceptual thought (*vikalpa*), real particulars (*svalakṣaṇa*) to be determined by unreal and fictional conceptual thought (*adhyavasāya*), and the ubiquitous process of other's exclusion (*anyāpoha*). These fictional notions force us to reach (*prāpaka*) the real particular in the empirical world. Against these backdrops, the intriguing question arises: How can these fictional things be instrumental in acquiring the knowledge about the real world? These are some of the complex problems, which are to be dealt with by Dharmakīrti (See Tillemans [41, 209]).

Dharmakīrti in his *Pramāṇavārttika* (I, 1ab: *pramāṇam avisaṁvādi jñānam arthakriyāsthitiḥ*.) characterizes *pramāṇa* as that valid/true cognition, which is non-deceptive in the sense that it must not be contradictory by means of experience (*avisaṁvādi-jñāna*). This is its epistemological characteristic. Its another characteristic is that it should also be pragmatic in the sense that its desirable object should be in a position to causally reveal itself to be captured by the cognition (*arthakriyāsthiti*). In addition, it is necessary that this *pramāṇa*-knowledge should also be unique and dynamically real. The same idea is differently presented in Dharmakīrti's *Nyāyabindu* (I.1: *saṁyagjñānapūvikāpuruṣārthasiddhir iti tad vyutpadyate*.), which marks that a valid/right/true cognition is a prerequisite to the accomplishment of all human purposes whether desirable or undesirable. Dreyfus [9, 288] succinctly observes:

> Indian epistemology examines the nature of *pramāṇa*, its scope, basis, reliability, and the like. This is the central concern of Dharmakīrti and his followers. . . Dharmakīrti's inquiry focuses on knowledge understood as valid cognition. His questions are clearly epistemological: What is *pramāṇa* and what are its different types? Which type of valid cognition is most fundamental? Does each type bear similarly on the empirical world? Let us examine these questions in order, starting with the first, what is *pramāṇa*?

With the preceding statement of Dreyfus [9, 288], I come to the end of my present article, which contains three most difficult areas of Buddhism, such as *Pramāṇa*-Epistemology, Logic, and Language on the one hand and on the other three ingenious thinkers, namely, Vasubandhu, Dignāga, and Dharmakīrti – which together made my task extremely difficult and it has consumed more than six months' time and occupied more than normal space, not to talk of overcoming the acute difficulties in my understanding of numerous relevant original and secondary sources so that the adequate account of the complex discussion by means of critical examination can be appropriately fulfilled along with the historical order, development of philosophical arguments, and methodology. Nevertheless, in the present task, I confess my limitations in understanding the perplexing subject under consideration.

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