

I. The Reception of Indian Logic in Tibet¹

1. Introduction

Tibetan monastic centers of learning had a culture of scholasticism comparable in many ways to that of the great universities of the Middle Ages in emphasizing logic, metaphysics, commentarial exegesis, scriptural authority, and linguistic analysis. The disputational approach of a twelfth century Parisian philosopher like Abelard, for example, who sought knowledge via *quaestio*, *disputatio*, *sic et non*, *quodlibet*, and *auctoritas*, finds convincing Tibetan parallels in the dialectical pedagogy and polemics of the Sa skya pa and dGe lugs pa schools. More generally, both cultures had comparable heroes: whether a medieval *philosophus* or a Tibetan *mtshan nyid pa* (“one versed in dialectics”), intellectuals were revered for their subtlety in philosophical and religious analyses, rhetorical skills, charisma and self-confidence, quick-wittedness in debate, and, last but not least, for insights on issues of logic and rationality.²

¹ In what follows I will refer the reader to already published material where possible and keep the quoted passages of Sanskrit and Tibetan to a minimum, especially if they have been discussed or translated elsewhere. There is also little point in citing numerous original sources for more or less the same idea or formulation—one or two will usually suffice, with more burdening the reader unnecessarily. On the other hand, I provide several references to articles and background material to provide a basic reading list. References to work on Dharmakīrti and Indian logic are a kind of tip of the iceberg; they are designed to give some direction to the non-specialist. Whatever the originality of the Tibetan contribution, it is hardly possible to take up Tibetan Tshad ma purely on its own and without a reliable working understanding of Dharmakīrti.

² See Le Goff 2000 on the approach and character of twelfth and thirteenth century European intellectuals like Abelard and Siger of Brabant; Sère 2020 for the roles of *auctoritas*, *quaestio*, *sic et non*, etc. in medieval debate; Samuels 2020 for comparison of Tibetan debate with *disputatio*.

What, then, do people mean by “Tibetan Buddhist logic,” or by the more or less equally common phrase “Tibetan Buddhist epistemology,” and what connection do these widely used designations have with other subjects studied traditionally by Tibetan Buddhists? The underlying Tibetan term is *tshad ma*. It conserves the etymological sense of the Sanskrit original *pramāṇa*, viz., a “standard” or “measure”; *tshad* renders the Sanskrit verbal root MĀ, “to measure,” with the Tibetan *ma* capturing the Sanskrit *ana* suffix and showing a means, source, or instrument. In philosophical Sanskrit, *pramāṇa* is the technical term for a source of knowledge, a reliable means to a correct new understanding. The Tibetan term *tshad ma*, of course, has that technical sense, but it also takes on a more general sense of the “theory of sources of knowledge” or, more broadly, a discipline of study and the literature pertaining to it. In what follows, we’ll use the terms “Pramāṇa” and “Tshad ma” (capitalized and without italics) to designate the Indian and Tibetan theoretical disciplines, respectively, and their literature, even if the use of the term to designate a *discipline* is admittedly not as clearly present in the Sanskrit as it is in Tibetan.³

Modern writers also regularly use the term “Buddhist epistemology” to capture the use of the words *tshad ma/pramāṇa* in the general sense of a theoretical discipline concerning sources of knowledge.⁴ It is, however, perhaps somewhat less clear why people speak of logic. Part of what looks

³ Many modern writers also speak of Pramāṇa as a *school* of Indian thought, which is also a relatively harmless liberty taken; curiously enough, this very influential movement of philosophy in India had no specific name in Sanskrit. In Tibetan, however, the situation is fortunately different: we can speak of *tshad ma'i lugs* “the Tshad ma tradition” or, as in traditional Tibetan doxographic literature (*grub mtha*’), we can designate the school as *rigs pa rjes su ‘brang pa’i mdo sde pa* “Sautrāntikas who follow reasoning,” or *rigs pa rjes su ‘brang pa’i sems tsam pa* “Yogācāras who follow reasoning,” reflecting the fact that Dignāga’s and Dharmakīrti’s stance on idealism and the existence of the external world was complex and nuanced, with external objects and atomic matter often provisionally accepted, only to be denied in the final analysis. On Dharmakīrti’s arguments for idealism as contrasted with those of Vasubandhu, see Kellner 2017.

⁴ The term “epistemology” should, however, be understood in the context of a Buddhist system of thought and not simply in terms of well-known Western senses. Buddhist Pramāṇa is, for example, certainly not a Kantian type of *Erkenntnistheorie* involving the synthetic *a priori* investigations of structures of thought, nor is it simply a “naturalized epistemology” (à la W.V. Quine and others) based on empirical psychological research of a natural

recognizably like logic is the Indo-Tibetan Buddhist “science of reasons” (*hetuvidyā* = *gtan tshigs rig pa*), a so-called “minor Buddhist science,” and the related genre of indigenous Tibetan texts known as *rtags rigs* “the varieties of reasons”—in them one finds discussions of good and bad reasons, fallacies, implication, and consequences. However, Tshad ma certainly is not limited to what we find in *hetuvidyā* or *rtags rigs* manuals. It also includes the extensive discussions of philosophy of logic that we find typically in works or chapters on “inference” (*rjes su dpag pa* = *anumāna*), one of the two sources of knowledge, along with perception. There are also rules on proper and improper ways to dispute. In short, besides the “science of reasons,” Tshad ma encompasses prescriptive accounts of how to reason publicly, philosophical accounts of how logical reasoning proceeds, and even some ontological issues of what must exist for that reasoning to be grounded in reality.

Perception, metaphysics, and even philosophy of mind were also to be included in the general subject of Tshad ma—with more or less complex connections with epistemology—just as for Indians they were also regularly taken up in *Pramāṇa* literature. And so were doctrinal matters of Buddhism. Indeed, many traditional Tibetans and Indians saw Tshad ma as essentially destined for Buddhist religious purposes rather than as a secular discipline of logic, epistemology, or philosophy of logic and language; its *raison d’être* was thus to provide proofs of Buddhist doctrine, like rebirth, omniscience, the four noble truths, compassion, no-self, etc., the culmination of *Pramāṇa* being in effect *pramāṇasiddhi*, the proof of the Buddha’s superiority to other teachers and his being a standard and reliable source in spiritual matters. The demarcation between broadly religious and philosophical approaches to Buddhism has, of course, been an enormous subject of conversation, not only in modern Buddhist Studies but also in the past in Tibet. Suffice it to say here that Tibetan Tshad ma, when viewed religiously, would need a very different treatment from what we are offering, and that a secular orientation to Tshad ma/*Pramāṇa* is not only legitimate in modern scholarship but was also to quite a degree present in traditional Tibet. A disclaimer is thus in order from the outset: we will largely leave aside the extensively discussed issues of perception,

phenomenon, nor is it a type of sociology and history of knowledge production as we find often emphasized, *inter alia*, in the francophone world under the term *épistémologie*.

metaphysics, and philosophy of mind as well as Tshad ma-inspired approaches to Buddhist religious doctrine and scripture.⁵

Tibetan Tshad ma, and indeed Tibetan Buddhist philosophical literature generally, has often been regarded as a prolongation, a supplement, or a kind of fine tuning of India, or even a pedagogical aid to Indian developments. Indeed, one of the finest scholars of both India and Tibet, David Seyfort Ruegg, has rightly maintained that Tibetans were in many respects indological scholars *avant la lettre*, making important and necessary contributions to our own historical understanding of Indian Buddhist thought.⁶ That said, although one certainly needs to know Indian thought well to understand Tibetan thought, it is odd to focus on Tibet *only* or *principally* as a way to understand India. For a wide-ranging scholar like Seyfort Ruegg the interest of ties to India certainly does not detract from the value and interest of ideas that were indigenously Tibetan and that perhaps had few or only obscure sources in India. Unfortunately, however, this type of open position was for quite some time preceded by a more closed orientation that was much less defensible, namely, that Tibetan Buddhist philosophical literature was of interest essentially in so far as it reflected or even copied Indian thought. Such a view was even promoted by quite a number of Tibetans themselves for perhaps understandable reasons of religious authority, India long being considered in Tibet the “Land of the Nobles” (*phags yul = āryadeśa*) and the repository of what is authentic in Buddhism. It is somewhat unfortunate, however, that a similar attitude to things Indian was for long a working premise of much modern Buddhist Studies. Arguably, the originality of indigenous developments in areas like

⁵ For Buddhist epistemologists’ religious philosophy, see e.g., Steinkellner 1982, McClintock 2010, Eltschinger 2014 and 2020, Eltschinger and Ratié 2013, Pecchia 2015. Tibetans regularly took the word *pramāṇa* in the homage verse of Dignāga’s *Pramāṇasamuccaya* to refer to a *tshad ma’i skyes bu* “a person who is a standard,” or “an authoritative person.” They emphasized the second chapter of *Pramāṇavārttika* (i.e., *Pramāṇasiddhi*) as the elaboration of a proof that the Buddha is such a person. The goal of epistemology and logic is thus conceived as the proof of *pramāṇa* in this extended sense. See Steinkellner 1983, Tillemans 1993; see Silk 2002 for possible Indian antecedents for the term *tshad ma’i skyes bu*.

⁶ Seyfort Ruegg 1981, viii: “... Tibetan scholars developed remarkable philological and interpretative methods that could well justify us in regarding them as Indologists *avant la lettre*.”

logic and epistemology have still, to a large degree, been underestimated and underexplored.

Indeed, when it comes to Tshad ma, in spite of the great respect that we should have for Indian writers like Dharmakīrti (seventh, or possibly sixth, century C.E.)⁷ and the Tibetan exegesis of his philosophy, there were also important Tibetan works that exhibited a high degree of originality and were only tenuously related to India. As we shall try to show, this genre of literature made some important conceptual distinctions concerning logic, significantly moving away from Indian preoccupations with themes in epistemology and metaphysics. By remaining centered on the consequences of various acceptances—be they true or not—these indigenous thinkers increasingly replaced concern with how things actually were in reality with a typical logician’s focus on what followed from what.

There are thus two sorts of Tshad ma literature in Tibet that will concern us in this study:

- (a) Tibetan exegetical works closely based on Indian texts; these are largely commentaries, summaries, or independent analytical treatises whose primary purpose is clarification of Indian texts and argumentation. Examples are the Tibetan commentaries on Dharmakīrti’s *Pramāṇavārttika* and *Pramāṇaviniścaya* by various authors, as well as works, like Sa skya Paṇḍita’s *Tshad ma rigs gter* or dGe ‘dun grub pa’s *Tshad ma rigs rgyan*, that provide an introduction to, and interpretation of, Indian Pramāṇa.
- (b) Indigenous Tibetan works on epistemology and logic that involve, to a large degree, Tibetan concepts, debate procedures, and argumentation that are unfindable in Indian texts or, in some important cases, even radically counter to Indian positions. The best examples are the so-called “Collected Topics” (*bsdus grwa*), of which the earliest text is the *Rwa stod bsdus grwa* of ‘Jam dbyangs mChog lha ‘od zer (1429-1500).

In what follows, we will consecrate a chapter to each of these two sorts of Tibetan literature, in order to bring out the dual character—i.e., the Indian-based and the indigenous—of the Tibetan contribution to Buddhist

⁷ See n. 11 below.

logic and the philosophy of logic. It should be borne in mind that our emphasis is philosophical: apart from the necessary historical background and important historico-philological discussions, many other complicated questions concerning connections between Tibetan thinkers or the origins of ideas and terms can not be pursued here. For more on such matters the reader is referred elsewhere.⁸

2. Four periods

We begin with a whistle-stop tour of the terrain. Following van der Kuijp 1989 and Hugon 2015, let us speak of four periods in the history of Buddhist logic and epistemology in Tibet,⁹ starting with the initial diffusion (*snga dar*) of Buddhism in Tibet, from the seventh century C.E. on, and continuing to the present day.

- (a) An ancient period, until very early ninth century C.E., or pre-Glang dar ma, during which some smaller Indian Pramāṇa works of Dignāga, Dharmakīrti, Vinītadeva, Śubhagupta, Kamalaśīla, Arcaṭa, and Dharmottara were translated.¹⁰

⁸ See van der Kuijp 1983 and 1989 for the history of Tshad ma in the pre-classical and classical periods of the eleventh through thirteenth centuries. See also Hugon 2008, 2015; D. Jackson 1987; Perdue 1992, 2014; Tillemans 1998, 1999; Dreyfus 1997, 1999; Onoda 1992, 1996.

⁹ The fourfold schema (coming from van der Kuijp 1989) is used in Pascale Hugon's synoptic article on Tibetan epistemology and philosophy of language in the *Stanford Encyclopedia of Philosophy*, i.e., Hugon 2015.

¹⁰ The *lDan dkar ma* / *lHan dkar ma* catalogue of the beginning of the ninth century (824 C.E. if we follow Zuihō Yamaguchi) mentions, *inter alia*, the *Ālambanaparīkṣā* of Dignāga (no.705), the *Nyāyabindu* (697), *Hetubindu* (702), *Sambandhaparīkṣā* (704), and *Samtānāntarasiddhi* (708) of Dharmakīrti, four commentaries on Dharmakīrti and Dignāga by Vinītadeva, four short works by Śubhagupta, the *Hetubinduṭīkā* (703) by Arcaṭa, Kamalaśīla's short text on the opposing positions in the *Nyāyabindu* (i.e., the *Nyāyabindupūrvapakṣasamṅkṣepa* 700, 701), and Dharmottara's *Nyāyabinduṭīkā* (698) and text on reincarnation, *Paralokasiddhi* (715). See Lalou 1953 and especially Frauwallner 1957 for this list. We should also mention that a scheme of four types of reasoning (*yukti*), as found in the *Samḍhinirmocanasūtra* and other texts, was known in this period and was commented upon in texts like the *bKa' yang dag pa'i tshad ma* attributed to the eighth century king Khri srong lde btsan. See Steinkellner 1989, 241 *et seq.*

- (b) A pre-classical period from the beginning of the so-called “second diffusion” (*phyi dar*) of Buddhism in the tenth century up to about the thirteenth century, during which the emphasis was on the *Pramānaviniścaya* of the pivotal Indian Buddhist thinker Dharmakīrti.¹¹ The text was translated and was the object of several influential indigenous Tibetan commentaries. The period is marked by the work of Ngog lo tsā ba Blo ldan shes rab (1059–1109), who translated the *Pramānaviniścaya* and wrote commentaries upon it. It also saw the so-called “Epistemological Summaries” or “Summaries of Pramāṇa” (*tshad ma bsduṣ pa*) of the school of Phya pa Chos kyi seng ge (1109–1169) of the bKa’ gdams pa monastery of gSang phu sne’u thog.¹² These texts, as their name implies, were summaries or compilations of Indian thought but actually also inject a substantial dose of original interpretation, possibly in part because of the relatively incomplete access to Indian material at that time.
- (c) The classical period of the thirteenth and fourteenth centuries. It begins with Sa skya Paṇḍita Kun dga’ rgyal mtshan (1182–1251), the very significant figure in the consolidation of Tibetan and Mongol power in the south of Tibet, and himself a first-rate scholar of Indian texts in

¹¹ On Dharmakīrti, his life, oeuvre, and philosophical positions, see Steinkellner 1998, Eltschinger 2010, Tillemans 2020. For a synopsis of the translations, editions, and studies of the works of Dharmakīrti and his commentators, see Steinkellner and Much 1995. Summaries of the contents of Dharmakīrti’s seven works are found in Potter 2017. The dates of Dharmakīrti remain controversial, although there is a slowly growing shift among scholars to accept that he lived in the latter half of the sixth century C.E. instead of the seventh century. See Frauwallner 1961 for the main arguments for fixing Dharmakīrti’s dates as circa 600–660; Krasser 2012 relies heavily on connections between Dharmakīrti, Bhāviveka, and Kumāriḷa to push the dates of Dharmakīrti’s activity back to the mid-sixth century C.E. Here are a few of the many works giving philosophical and historical treatments of Dignāga, Dharmakīrti, and the Indian school of Buddhist logic: Stcherbatsky 1930–32; Frauwallner 1932, 1933, 1954; Kajiyama 1966; Hattori 1968; Steinkellner 1971; Mimaki 1976; Dunne 2004; Paul 2005; Siderits 2007; Siderits, Tillemans, Chakrabarti 2011; Eltschinger and Ratić 2013; Kellner 2017. For the current state of the art in Dharmakīrtian studies, see Kellner *et al.* 2020.

¹² On gSang phu sne’u thog and its role in the history of Tibetan logic and epistemology, see van der Kuijp 1983, Onoda 1992, the introduction to Dreyfus 1994, Hugon and Stoltz 2019.

Sanskrit. During this period, Dharmakīrti's largest and most important work, the *Pramāṇavārttika*, is finally well translated into Tibetan¹³ and becomes the focus of indigenous commentaries. A major delegation of Indian monks—led by the Kashmiri scholar Śākyaśrībhadra (?-1225)—visits Tibet and closely collaborates with Sa skya Paṇḍita.¹⁴ This can be said to be the most Indian-oriented period, and probably even the period that was most reliably informed on Indian Pramāṇa literature in Sanskrit.

- (d) A post-classical period that begins in the fifteenth century and is characterized by debate between traditions of the pre-classical and classical periods. In particular, we find competing developments based on the earlier Phya pa and bKa' gdams pa traditions, on the one hand, and the Sa skya schools, on the other, i.e., the so-called Phya-traditions (*phya lugs*) and Sa-traditions (*sa lugs*), respectively.¹⁵ The bKa' gdams pa and Phya-traditions evolved to become the dGa' ldan pa or dGe lugs pa, and would count such luminaries as Tsong kha pa Blo bzang grags pa (1357-1419) and his principal disciples, rGyal tshab rje Dar ma rin chen (1364-1432) and mKhas grub rje dGe legs dpal bzang po (1385-1438). Two of the most important figures of the Sa-traditions were Go rams pa bSod nams seng ge (1429-1489) and gSer mdog Paṅchen Śākya mchog ldan (1428–1508). We should also mention that it is in this post-classical period that we find the so-called “Collected Topics” (*bsdus grwa*) literature, which presents a sophisticated Tibetan logic with only rather tenuous connections with India. This indigenous Tibetan logic will be taken up in detail in the second chapter of this study.

¹³ There had been an early, and no doubt unsatisfactory, translation of Dharmakīrti's *Pramāṇavārttika* by rMa lo tsā ba dGe ba'i blo gros (1044-1089); rNgog blo ldan shes rab translated Devendrabuddhi's *Pramāṇavārttikapañjikā*, but it was no doubt Sa skya Paṇḍita himself who was largely responsible for the definitive Tibetan translation of *Pramāṇavārttika* that figures in the Tibetan Buddhist canon.

¹⁴ The delegation was comprised of several *paṇḍitas* besides Śākyaśrī himself; amongst them Vibhūticandra and Dānaśīla also played an important role in translation and exegesis of Indian Pramāṇa literature.

¹⁵ For a detailed comparison of Sa lugs and Phya lugs positions on various subjects of Pramāṇa philosophy, see Dreyfus 1997.

3. *Indian sources for Tibetan Tshad ma*

As we can see from the above periodization, Tibetan theorizing about Indian logic and epistemology began in earnest in the tenth and eleventh centuries in the pre-classical period. While the initial diffusion of the Dharma, from the seventh century to the mid-ninth, saw first attempts at translating Indian Pramāṇa texts, it was from about the eleventh until the fifteenth centuries that there was genuine assimilation and competent translation of the major Indian Buddhist works. The *Pramāṇaviniścaya*, *Pramāṇavārttika*, and other works of Dharmakīrti and his school were well translated and understood by Tibetan writers and formed the main Indian textual basis for Tibetan exegesis on Indian Buddhist logic and epistemology.

By contrast, the works of Dignāga (c. 480 - c. 540 C.E.) never played a role comparable to those of Dharmakīrti. Dignāga's major opus, the *Pramāṇasamuccaya*, although certainly *said* to be the founding text for Tshad ma, was actually of relatively little influence in Tibet. While there were a number of indigenous commentaries over the centuries, from that of bCom ldan rigs pa'i ral gri (1227-1305) to that of Mi pham 'Jam dbyangs nam rgyal rgya mtsho (1846-1912),¹⁶ the abysmally low quality of *Pramāṇasamuccaya*'s two Tibetan translations no doubt impeded in-depth study and understanding of this text in its own right. Dharmakīrti's interpretation of Dignāga predominated instead. Indeed, Dignāga's logic and epistemology were essentially understood via quotations and commentary in other texts, notably in the works of Dharmakīrti and the Dharmakīrtian commentator on *Pramāṇasamuccaya*, Jinendrabuddhi. The specific features in Dignāga's philosophy that set it apart from that of Dharmakīrti were largely obscured. As for Dignāga's *Nyāyamukha*, it does not seem

¹⁶ Van der Kuijp and McKeown 2013, xcvi list ten, including commentaries by rGyal tshab Dar ma rin chen, Rong ston Shes bya kun rig, and sTag tshang lo tsā ba Shes rab rin chen. We also have a *Tshad ma'i de kho na nyid bsdu pa*, attributed to the great rNying ma pa scholar Klong chen rab 'byams pa (1308-1364), that purportedly is an epitome/summary of the essentials of Dignāga's *Pramāṇasamuccaya* and Dharmakīrti's *Pramāṇaviniścaya*. The text is apparently to be situated in the tradition of rNgog lo tsā ba and Phya pa Chos kyi seng ge. See van der Kuijp 2003.

to have been studied or translated in Tibet. Instead Tibetans studied a related text, the *Nyāyapraveśa* of Śāṅkarasvāmin and often confused the *Nyāyamukha* with the *Nyāyapraveśa*, understandably because the Tibetan title of the *Nyāyapraveśa*, viz., *Rigs sgo*, was easily wrongly taken to designate the *Nyāyamukha* instead.¹⁷

The main Tibetan orientation in Tshad ma was thus significantly different from that of the indigenous Chinese school of Xuanzang and Kuiji, in that the latter *did* focus on Dignāgan positions in their own right and fundamentally untouched by Dharmakīrti, whose works were untranslated in Chinese. For the Tibetans, by contrast, Dharmakīrti *was* well translated and his influence eclipsed that of the largely inaccessible Dignāgan literature. It is important to note, too, that although much of the in-depth Tibetan assimilation of logic and epistemology dates from the eleventh century on, the highly technical later Indian logical literature of that period was *not* the primary inspiration for Tibet. The Indian sources inspiring Tibetan study were essentially the works of Dharmakīrti and the seventh and eighth century commentators, Devendrabuddhi and Śākyabuddhi, who commented quite closely upon the wording and syntax of Dharmakīrti's works in their *Pramāṇavārttikapañjikā* and *Pramāṇavārttikaṭīkā*, respectively. Prajñākara Gupta (eighth century C.E.) was well known, and his voluminous *Pramāṇavārttikālamkāra* was the source of some of the more philosophically sophisticated developments, as well as applications of Pramāṇa to Buddhist religious ends. We also find the later Kashmiri Brahmin writer Śāṅkaranandana (ca. 940/50-1020/30) playing a significant role as a commentator on *Pramāṇavārttika* and as a philosopher of language, perhaps one of the promulgators of a moderate realism about universals.¹⁸ It is telling that in indigenous commentaries on *Pramāṇavārttika*—for example the *rNam 'grel thar lam gsal byed* of rGyal tshab rje and other such commentaries—Tibetan

¹⁷ Cf. Harbsmeier 1998, 361: “In Sung times (+960 to +1279) the Chinese version of the *Nyāyapraveśa* was translated into Tibetan. The Tibetans mistook the book to be Dignāga's famous *Nyāyamukha* of which they had heard, and the same happened to another Sanskrit version which they translated into Tibetan around the +13th century.” For an English translation of the *Nyāyapraveśa*, see Tachikawa 1971. For translations of the *Nyāyamukha*, see Tucci 1930, Katsura 1977, 1978, 1979, 1981.

¹⁸ The dates for Śāṅkaranandana are those of Krasser 2002; on this key thinker see Krasser 2002, Eltschinger 2015. On later Kashmiri Buddhists, see Naudou 1968.

authors quite regularly contrast the positions of *Lha dbang blo* and *Śākya'i blo* (Devendrabuddhi and Śākyabuddhi), *rGyan mkhan po* (“the author of the [Vārttik]ālamkāra,” i.e., Prajñākaragupta), *Bram ze chen po* (“the big brahmin,” i.e., Śāṅkaranandana), and *Chos mchog* (Dharmottara), the latter being an eighth century thinker who did not write a commentary on *Pramāṇavārttika* but instead wrote influential commentaries on Dharmakīrti's *Pramāṇaviniścaya* and *Nyāyabindu*. The regular contrasts between these four or five positions show that, on significant themes, the works of Dharmakīrtian commentators and their different interpretative traditions were well understood.

Very important, too, are the works of Śāntarakṣita and his disciple Kamalaśīla, no doubt because of the presence of these scholars in Tibet in the eighth century and the founding of the first Tibetan monastery at bSam yas in the Brahmaputra Valley. Indeed, it is difficult to overestimate the influence of Śāntarakṣita and Kamalaśīla on Tibetan Buddhism, be it in Madhyamaka, Buddhist doctrine, or Pramāṇa—Śāntarakṣita's *Tattvasaṃgraha* and Kamalaśīla's *Pañjikā* thereupon were thus influential texts in Pramāṇa. By contrast, later Indian logicians of the tenth to twelfth centuries such as Jñānaśrīmitra (floruit 975-1025), Ratnakīrti, and Mokṣākaragupta, who had technically sophisticated debates with the Brahmanical schools of the time, were of negligible influence in Tibet. While the *Pramāṇavārttika* and *Tattvasaṃgraha* debates with the Brahmanical schools were studied and understood, important texts of the tenth to twelfth century Indian Buddhist literature dealing with the specific later developments on logical problems arising in refuting permanence, God, etc., were often only of marginal influence—many works that had considerable influence in Indian Buddhism were simply never translated into Tibetan.¹⁹ So, although there were some exceptions to this marginalization—bits and pieces of later Indian Pramāṇa positions that somehow came to be assimilated into intra-Tibetan debates²⁰—the

¹⁹ The many works of Jñānaśrīmitra, for example, were not translated, with the exception of his *Kāryakāraṇabhāvasiddhi* (D. 4258). Two of the best resources for later Indian Buddhist-Brahmanical debates remain Kajiyama 1966 and Mimaki 1976. See also the translation of Jñānaśrīmitra's *Apoḥaprakaraṇa* in McCrea and Patil 2010.

²⁰ For example, some elements in the debates on “internal pervasion” or “intrinsic implication” (*antarvyāpti* = *nang gi khyab pa*)—i.e., those concerning the dispensability

impact of the later Indian literature was little, one of the reasons probably being that the works of the post-eighth century *non-Buddhist* authors figuring heavily in Buddhist-Brahmanical debates—principally Jain, Nyāya, and Mīmāṃsaka—were not adequately understood in Tibet or even known at all. For example, in texts like Jñānaśrīmitra’s *Aphaprakaraṇa*, the argumentation is largely directed against Naiyāyikas like Trilocana, Bhāsarvajña, and Vācaspatimiśra, who were, as far as I can tell at least, unknown in Tibet. The contextless logico-metaphysical debates on Pramāṇa, if anyone in Tibet ever looked at them in their dense Sanskrit, must have seemed particularly confusing.

In sum, Tibetan debates, innovations, and fine tunings on Indian Pramāṇa philosophy concern essentially the period from Dharmakīrti to the ninth century, with Dignāga’s thought little understood in its own right, and the thought of the very late Indian thinkers playing little role at all. Many of the Tibetan commentarial developments, it should be said, were more or less learning experiences, rather complicated stages in the Tibetan discovery and assimilation of Indian philosophical literature. Others, however, are of genuine philosophical interest. We will look in some detail at the most important of these developments concerning logic. After that, we will move on to Tibetan positions on crucial semantic issues in Dharmakīrti and then finally to Tshad ma-related issues concerning negation operators and parameterization in the wider context of Indian tetralemma argumentation.

4. The triply characterized logical reason (trirūpahetu) in Tibet

The key concept in the Indian Buddhist “science of reasons” (*hetuvidyā*) is the notion of a good logical reason (*saddhetu*), and the criteria for a reason’s being good, viz., the three characteristics. It hardly needs saying that good reasons and their triple characterization (*trairūpya*) is a subject of major importance in Indian Buddhist Pramāṇa—it figures in

of examples and the reformulation of key notions like “similar instances” (*sapaḥṣa = mthun phyogs*)—were taken over in Tibetan philosophies. Thus, we do find a certain importance for the *Antarvyāptisamarthana* of Ratnākaraśānti (c. 1000 C.E.). See section 6 below. Works of Jetāri (floruit 940-980), a teacher of Atiśa, also had a certain impact, especially in promoting the interpretation of Dharmakīrti as a Mādhyamika; they are also occasionally cited in indigenous *rTags rigs* literature.

the opening verse of *Pramāṇavārttika* and in other works of Dharmakīrti and Dignāga. What did Tibetans do with this idea? Did they understand it properly and further develop it in any interesting directions? Let's begin with presentations of the three characteristics in Dignāga, Dharmakīrti, and in a representative nineteenth century work by Yong 'dzin Phur bu lcog Byams pa tshul khirms rgya mtsho (1825-1901), a dGe lugs pa *rTags rigs* that was regularly used in Lhasa's Se ra monastery. A comparison of the three gives a snapshot of how things evolved and what typical Tibetan contributions were.

Here, first, is Dignāga's *Pramāṇasamuccaya* II.5:

anumeye 'tha tattulye sadbhāvo nāstitāsati /.²¹

“[A good reason] is present in the inferendum [i.e., in the subject] and in what is similar to it, and is absent in what is not [similar to it].”

Dharmakīrti's *Nyāyabindu* II.5 then reads:

*trairūpyaṃ punar liṅgasyānumeye sattvam eva sapakṣaiva sattvam
asapakṣe cāsattvam eva niścitam* /.

*tshul gsum pa nyid kyi rtags ni / rjes su dpag par bya ba la yod pa nyid
dang / mthun pa 'i phyogs nyid la yod pa dang / mi mthun pa 'i phyogs
la med pa nyid du nges pa 'o* //.²²

“The triple characterization of a [good] reason is as follows. It is ascertained (*niścita*) that: (1) [the reason] is only present [i.e., and never absent] in the inferendum [i.e., in the subject]; (2) [the reason] is present in only the similar instances (*sapakṣa*) [i.e., and not in the dissimilar instances, too]; (3) [the reason] is only absent [i.e., and never present] in the dissimilar instances (*asapakṣa* = *vipakṣa*).”

The *rTags rigs* of Yongs 'dzin Phur bu lcog then gives a fully elaborated version of the three characteristics:²³

²¹ Sanskrit in Randle 1926, 7.

²² Sanskrit ed. Malvania 1955, 91. Tibetan in D. 231a-b; ed. La Vallée Poussin 1913, 3; ed. T. Jinpa 2015, 389.

²³ For the Tibetan text, see Onoda 1981, 23-24. Lest it be wondered whether these are typical formulations in dGe lugs pa *rTags rigs* literature, it is clear that they are. The

de sgrub kyi shes 'dod chos can skyon med kyi steng du 'god tshul dang mthun par yod pa nyid du tshad mas nges pa / de sgrub kyi phyogs chos kyi mtshan nyid /.

“The definition of the *pakṣadharmā* [i.e., the fact that the reason qualifies the subject] for proving *P* is as follows: [the reason] is ascertained by means of a source of knowledge (*pramāṇa*) to be only present, in accordance with the appropriate way of stating [the verb *yin* or *yod*], in the faultless subject of inquiry when one is proving *P*.”

de sgrub kyi mthun phyogs kho na la 'god tshul dang mthun par yod pa nyid du tshad mas nges pa de / de sgrub kyi rjes khyab kyi mtshan nyid /.

“The definition of the *anvayavyāpti* [i.e., the positive pervasion]²⁴ for proving *P* is as follows: [the reason] is ascertained by means of a source

rTags rigs of the great dGe lugs pa scholar ‘Jam dbyangs bzhad pa Ngag dbang brtson ‘grus (1648-1722), for example, has pretty much exactly the same definitions; see the definitions on f. 13a *et seq.* Sa skya pa *rTags rigs* texts, like that of Glo bo mkhan chen bSod nams lhun grub (1456-1532), are based on the *Rigs gter* of Sa skya Paṇḍita and differ from the dGe lugs in their formulation of the second and third characteristics. See Hugon 2002, 62-66, 138-139.

²⁴ The term *anvaya* (lit. “going after”) derives from Indian grammatical literature (*vyākaraṇa*) where it has the sense of “co-presence,” while *vyatireka* has the sense of “co-absence.” They are typically applied as an inductive method to words and referents to determine what word refers to what thing. See Katsura 1983, 541: “In Indian philosophy *anvaya* and *vyatireka* jointly make up a sort of method of induction. They may be formulated as follows: ‘When *x* occurs, *y* occurs (*anvaya*), and when *x* is absent, *y* is absent (*vyatireka*).’” It then evolves to a logical usage such that it means the co-presence of the property to be proved *G* and the reason *F* in an example (*dr̥ṣṭānta*), and the co-absence of *G* and *F* in example entities. Pervasion (*vyāpti*) is the fact that the reason *F* implies the property to be proved *G*. Thus, ordinarily, to say that a reason *F* is pervaded by a property to be proved *G* unpacks as a universally quantified material implication, For all *x*, if *Fx* then *Gx*, i.e., $(x)(Fx \rightarrow Gx)$. A more literal translation of *anvayavyāpti* and *vyatirekavyāpti* would thus be, respectively, “pervasion as co-presence” and “pervasion as co-absence,” the point being that the first pervasion shows a generalized co-presence of *F* and *G* in entities and the second a generalized co-absence, i.e., $(x)(Fx \rightarrow Gx)$ and $(x)(\neg Gx \rightarrow \neg Fx)$, respectively. A less exact, but shorter, translation is “positive pervasion” and “negative pervasion.” See Oberhammer *et al.* 1991, *s.v.* *anvaya*, for the evolution of the two terms from a grammatical to a logical usage. Finally, as we will bring

of knowledge to be present, in accordance with the appropriate way of stating [the verb *yin* or *yod*], in only the similar instances for proving *P*.”

de sgrub kyi dngos kyi bsgrub bya 'i chos kyi don ldog dang 'brel stobs kyis de sgrub kyi mi mthun phyogs la 'god tshul dang mthun par med pa nyid du tshad mas nges pa / de sgrub kyi ldog khyab kyi mtshan nyid /.

“The definition of the *vyatirekavyāpti* [i.e., the negative pervasion] for proving *P* is as follows: on account of its necessary connection with the concept that is the actual property being proved, [the reason] is ascertained by means of a source of knowledge to be only absent, in accordance with the appropriate way of stating [the verb *yin* or *yod*], in the dissimilar instances for proving *P*.”

The first thing one notices is that the definitions obviously become longer and more complicated over time. Dignāga is the most concise, while at the other extreme Yongs ‘dzin Phur bu lcog includes so many provisos as to virtually defy English translation. Here are some of the things that catch one’s eye in reading a Tibetan like Phur bu lcog in comparison with his Indian predecessors. Some are philosophical innovations; others are essentially dependent on, and account for, linguistic features of the Tibetan language.

de sgrub. We begin with the first words of the definition of the *pakṣadharmā*(*tva*) in Yongs ‘dzin Phur bu lcog, i.e., *de sgrub kyi* (“for proving *P*”). Although many of Phur bu lcog’s definitions, as we shall see, are amplifications of Dharmakīrtian ideas, we see an innovation in his introduction of a propositional variable, literally “that” (*de*) in Tibetan, which I am rendering by *P*. This is a difference vis-à-vis Indian Buddhist texts on the *trairūpya*, where no such variable figures. Indian texts do admittedly use *tad* (“that”) on occasion in other philosophical contexts more or less like a variable standing for a property or entity (as, for example in a phrase like *tatkāryatā* “being an effect of that,” “being an effect of *x*”), but Tibetans seem to recognize that a fully fledged propositional variable is needed in a general theory of reasons.

out in section 6, there are competing Indo-Tibetan exegeses of the *anvayavyāpti* and *vyatirekavyāpti* in the triple characterization: the logically simplest scenario indeed unpacks as $(x)(Fx \rightarrow Gx)$ and $(x)(\neg Gx \rightarrow \neg Fx)$, but the more complex scenario demands some additional provisos in the antecedent of the conditional.

shes 'dod chos can skyon med. The proviso in Yongs 'dzin Phur bu lcog that the first characteristic must be established on the basis of a "faultless subject of enquiry" (*shes 'dod chos can skyon med*) is a way of bringing out Dharmakīrti's idea, in the second chapter of the *Pramāṇaviniścaya* and other texts, that the opponent must have the appropriate "desire to know" (*jijñāsā*) whether the proposition to be proved is true or not.²⁵ In the Indian texts we find the term *jijñāsītadharmin*, literally, "the subject about which one desires to know," "the subject of enquiry." However, the idea is much more precisely formulated by Tibetans. Yongs 'dzin Phur bu lcog in his *rTags rigs* explains that it must be possible for the opponent to know that the reason qualifies the subject and yet still reasonably doubt whether the proposition to be proved is true.²⁶ This obviously rules out circular proofs along the lines of "A is B, because it is B" and various other forms of question begging. As well, it rules out cases where the debate falls flat because the opponent simply does not have the required doubt at all. More sophisticatedly, in Tibet it leads to debates concerning what could be called problems of "epistemic priority," e.g., arguments that can be challenged because understanding the fact that the reason qualifies the subject would already somehow presuppose understanding the truth of the proposition to be proved. Tibetans elaborate upon this in considerable detail and in ways that are not present in Dharmakīrti, employing a technical term *go dka' sla* "[relative] ease or difficulty of understanding." For example, it is argued that when one invokes a definiendum (*mtshon bya = lakṣya*) to prove a defining characteristic (*mtshan nyid = lakṣaṇa*) the former is more difficult to understand (*go dka' ba*) in that it presupposes the understanding of the latter, and that therefore the subject will not be a faultless subject of enquiry—this in turn means that the first characteristic will fail.

²⁵ See *Pramāṇaviniścaya* II, ed. Steinkellner 1973, 30. Both Sa skya pa and dGe lugs pa incorporate this term *shes 'dod chos can = jijñāsītadharmin* into their definitions of the first characteristic. See, e.g., Go rams pa's *Rigs gter gyi don gsal bar byed pa*, Sa skya bka' 'bum Vol. 11, f. 96b5-6 and Yongs 'dzin Phur bu lcog's *rTags rigs*, ed. Onoda 1981, 17. See Tillemans 1999, 108, n. 15.

²⁶ See Tillemans 1999, 108, n. 15 for the passage.

'god tshul dang mthun pa. The proviso “in accordance with the appropriate way of stating [the verb *yin* or *yod*]” (*'god tshul dang mthun par*), which is present in each characteristic’s definition, is a somewhat longwinded formula designed to account for the fact that Tibetan (like modern Chinese *shi* 是 and *you* 有) distinguishes between a simple copula, *yin*, and an existential verb, *yod*. Being “in accordance ...” is a way to say that if the verb is *yin* in the argument, it must remain *yin* when one is assessing the three characteristics. Similarly for *yod*. These two verbs, and the resulting possibilities for confusion between them, are not reflected in Sanskrit verbs like *asti* and *bhavati*. They are of course important in Sino-Tibetan languages, and hence it became important to provide for them in transposing the Indian *trairūpya* schema into Tibetan. Thus, for example, where Sanskrit uses a nominative (*parvataḥ* “mountain”) and a substantive with the *mant* suffix (“having...”) to express “having fire” (*vahnimān*) in the stock reasoning *parvato vahnimān dhumāt* (“The mountain has fire, because of [its] smoke”), the Tibetan has to use an oblique case marker *la* plus the verb *yod* (*du ldan gyi la la me yod te du ba yod pa'i phyir*; literally “On the smokey pass there exists fire, because there is smoke”). Equally, where Sanskrit uses the genitive case and the abstraction suffix *tva* or *tā* but no copula (e.g., *śabdasyānityatvaṃ kṛtakatvāt* “Sound has impermanence, because of its being a product”), the Tibetan is obliged to proceed differently with a copula *yin*.

nyid. Tibetan has two ways of expressing the Sanskrit particle *eva* (“only”) that is so important in the Indian *trairūpya*. In Tibetan canonical translations we typically find *kho na* being used for *eva*, but often, as in the case of the translation of the *Nyāyabindu* passage (see above), *nyid* is used instead. In indigenous works, too, *nyid* is used widely. The use of *nyid* here creates some problems, for the particle is ambiguous in Tibetan, often rendering Sanskrit abstraction suffixes *tva* or *tā* (as in *stong pa nyid* = *śūnyatā* “emptiness” or *sngon po nyid* = *nīlatva* “blueness”) and also *eva*.²⁷ The *rTags rigs* definitions under scrutiny compound the

²⁷ See e.g., Blo mthun bSam gtan *et al.*, *Dag yig gсар bsgrigs s.v. nyid: 1. ngo bo'am gshi ka'i ming ste ... 4. tsam dang kho na'i don te ...* (1. a noun for an essence or character... 4. in the sense of “mere” or “only” (*kho na*)). The *Bod rgya tshig mdzod chen mo* (Zanghan da cidian ed. by Zhang Yisun *et al.*) entry for *nyid* explains its use as *kho na*.

difficulties because they use both *nyid* and *kho na*: thus *yod pa nyid* renders Nyāyabindu's *sattvam eva* in the first definition, *mthun phyogs kho na la* renders Nyāyabindu's *sapakṣa eva (mthun phyogs nyid la)* in the second, *yod pa nyid* then renders *sattvam* in the second, and *med pa nyid* renders *asattvam eva* in the third. While the use of *nyid* in *rTags rigs* accurately reflects the canonical translation's use of *nyid* to render *eva* in the first and third definitions, it seems, however, that dGe lugs pa *rTags rigs* texts came to add an additional *nyid* in the second definition because of the *tva* in *sattva*. There was, then, obviously some confusion because of the double sense of *nyid*. In the *anvayavyāpti* definition dGe lugs pa authors confusedly use *nyid* after *yod pa*, while in the usual Dharmakīrtian second definition *sattva* is *not* followed by *eva* at all, nor is there a *nyid* here in the canonical translation of the passage. The potential for going astray is relatively serious. If, *par malheur*, one happened to take this *yod pa nyid* as expressing *sattvam eva*, instead of just *sattvam*, the *anvayavyāpti* definition would become quite wrong; indeed Dharmakīrtians in India and Tibet explicitly argue against putting *eva (nyid, kho na)* there after *sattva* in the second definition.²⁸

²⁸ In all fairness, I don't know whether Tibetan exegetes actually *did* go astray in this way because of the unnecessary *nyid*. In any case, the logical problem would be that a good reason for proving impermanence, like "arisen from effort" (*prayatnānantarīyakatva = rtsol ba las byung ba*), would end up not satisfying the second characteristic. While "arisen from effort" would be present in *only* the similar instances, i.e., impermanent things, it would not be *only* present in the similar instances. The problem in placing *eva* after *sattvam* in the second definition, i.e., reading "only present in ..." rather than "present in only ..." would be that one would wrongly demand that the similar instances be pervaded by the reason, i.e., for all *x*: if *x* is a similar instance then *x* has the property of the reason. There are impermanent things, like naturally occurring phenomena unproduced by man, in which the reason is not present. In other words, while it is so that for all *x*: if *x* is arisen from effort then *x* is impermanent, it is *not* so that for all *x*: if *x* is impermanent then *x* arises from effort. See Dharmottara, *Nyāyabinduṭīkā* ad II. 5 (ed. Malvania 94): *sattvagrahaṇāt pūrvāvdhāraṇavacanena sapakṣāvvyāpīsattākasyāpi prayatnānantarīyakasya hetutvaṃ kathītam / paścād avadhāraṇe tv ayam arthaḥ syāt sapakṣe sattvam eva yasya sa hetur iti prayatnānantarīyakatvaṃ na hetuḥ syāt*. "With the restricting expression [only = *eva*] placed before the word 'present' (*sattva*), then things that are present [in similar instances] but do not pervade the similar instances, such as 'arisen from effort,' are also asserted to be [good] reasons. If, however, the restriction [*eva*] is after [*sattva*], then the meaning would [wrongly] become the

That said, if this and other indigenous formulations may have sometimes had problems with an ambiguous *nyid*, the uses of *eva* in the *trairūpya* and in Indian grammarians' analyses of Sanskrit syntax were certainly understood in Tibet. Those uses were taken up by Dharmakīrti *in extenso* in texts such as *Pramāṇavārttika* IV k. 190-192; two of the three are particularly important in the context of the *trairūpya*. Notably, the "elimination of non-possession" (*ayogavyavaccheda* = *mi ldan rnam gcod*) and "elimination of possession of something else" (*anyayogavyavaccheda* = *gzhan ldan rnam gcod*), conveyed by different placings of *eva* ("only") in the first and second definitions, respectively, serve as ways to convey different uses of universal quantification.²⁹ These uses of *eva* in the *trairūpya* are regularly discussed in Tibetan literature. They form a kind of recurring "lesson" in indigenous *Pramāṇavārttika* commentaries and in some *rTags rigs* texts. Tibetans were, for example, aware of the detailed and rigorous discussion in Dharmottara's *Nyāyabinduṭīkā* ad II k. 5 of the logical consequences of right and wrong placements of *eva* in the *trairūpya*.³⁰ The understanding of the logical aspects of quantification in the *trairūpya*, thus, does not differ from that of Dharmakīrti, even if the vacillation between *nyid* and *kho na* and the double duty of *nyid* suggests some nagging philological difficulties in handling the Indian material.

5. The goodness and badness of reasons for Dignāga, Dharmakīrti, and Tibetans

So much for specific details and philological issues in the formulations of the three characteristics. What can we say about the more philosophical aspects concerning logical reasons in Dignāga, Dharmakīrti, and in Tibetans like Phur bu lcog? Modern writers on Indian and Tibetan logic frequently speak of reasons being "valid" or "invalid," which unfortunately tends to lead to a bout of conceptual chaos in rendering the Indian term *saddhetu* or the equivalent Tibetan terms *gtan tshigs yang dag* and *rtags yang dag*. I have regularly argued that the triply characterized reason, a *saddhetu*, is

following: A [good] logical reason is one that is only present in the similar instances. Then 'arisen from effort' would not be a [good] reason [for proving impermanence]."

²⁹ These two uses of *eva* and their connection with pervasion are taken up below. See n. 40. For a translation and discussion of *Pramāṇavārttika* IV.190-192, see Kajiyama 1973.

³⁰ See, e.g., Se ra Chos kyi rgyal mtshan's *rNam 'grel spyi don* folio 58 *et seq.*

not to be viewed as a reason that is simply formally valid, as if a reason P being a *saddhetu* for Q were no more than a matter of $P \neq Q$, viz., that Q was a *logical* consequence of P , in virtue of the form of the statements and independent of content.³¹ Let's instead just speak of a *saddhetu* as a “good reason” and a *hetvābhāsa* (*gtan tshigs ltar snang*, literally “pseudo-reason”) as a “bad reason.” Here are some general comparative observations about what that goodness is for Dignāga, Dharmakīrti, and a Tibetan like Phur bu lcog.

First of all, factual content, and not just logical form, matters to a reason's goodness for these three logicians—India and Tibet are no different on that score. If we, for the moment, slightly deform things by taking the three characteristics as showing, *inter alia*, premises in an argument (rather than criteria for evaluating a reason), then the question of the truth of the premises is crucial, and not just the formal validity of the inference: this is part of what is involved in Dharmakīrti and *rTags rigs* saying that the three characteristics must be “ascertained” or “ascertained by a *pramāṇa*”—if a proposition is ascertained by a source of knowledge it is true.³² Though Dignāga does not state “ascertained,” still for him, too, reasoning from truths to other truths is essential. To put things in other terms, in India and Tibet soundness (arguments that do have true premises and entail a true conclusion) is much more emphasized than validity (arguments where the premises, if true, would entail a true conclusion).

Second, while the actual truth of the premises as well as the entailment of the conclusion are important, this certainly isn't all there is to goodness. Providing an account of what type of reason is a good one also involves considerations of epistemic priority, the makeup of the opponent's belief set, the opponent's receptivity to certain arguments, and his doubts. Thus the triple characterization, with its provisions concerning “ascertainment,” “faultless subjects of enquiry,” “proper opponents,” and the like, also takes up essentially epistemic, and even rhetorical, matters: what can one rationally doubt when one believes or knows such and such a proposition

³¹ See Tillemans 2008.

³² Tibetan definitions of the three characteristics often specify who is doing the ascertaining. It is supposedly a “proper opponent” (*phyi rgol yang dag*), i.e., a type of ideal rational individual. The term seems to be a Tibetan development, although certainly not in contradiction with Indian ideas. See Nemoto 2013.

to be true? What type of reason will, or should, succeed in changing beliefs and for which kind of person? Indian Pramāṇa specialists treated these matters as largely implicit in their *trairūpya* definitions; Tibetan Tshad ma makes them quite explicit.

Here is a sample of the type of epistemically oriented discussions that arise. First, as mentioned earlier, for a reason to be a good one, the opponent must have the requisite doubt as to whether the proposition being debated is true. Indeed, the fact that a particular opponent already believes or knows the truth of the proposition being debated means that the reason will be categorized as faulty *for him* given his belief set, even though it may generally be a good one for opponents. Thus, reasons are good relative to opponents and their belief set; often the opponent is understood to be the *ideal* rational individual; sometimes one delves into the belief sets of particular (less than ideal) individuals. Second, as a good reason is one that can rationally persuade opponents to revise their beliefs, it must be couched in terminology and concepts to which the opponent is receptive; if, for example, the reason or subject are not ones that the opponent can acknowledge in his philosophy, then the argument will not be persuasive at all to him and will not change his beliefs. Another requirement: the opponent must still be able to rationally doubt the proposition's truth even though she has ascertained that the subject is qualified by the reason and has even ascertained that the reason is pervaded by the property. For example, a reason like "being audible" is not a good one for proving that sound is impermanent, because audibility is coextensive with sound: in that case it would be impossible to know that all audible things are impermanent and yet continue to doubt rationally whether sound is impermanent. "Audibility" (*mnyan bya (nyid) = śrāvaṇatva*) is considered here to be "a reason that is uncertain because of being overly exclusive" (*thun mong ma yin pa'i ma nges pa'i gtan tshigs = asādhāraṇānaikāntikahetu*): there is an extensive analysis of this type of reason, in epistemic terms, in the dGe lugs pas' *rTags rigs* texts and in their commentaries on *Pramāṇavārttika*.³³

To represent these epistemic aspects of the triple characterization adequately it seems that we would need to change course significantly from the way modern writers have typically used elementary logic tools to elucidate Buddhist ideas. Instead of using simple, first order predicate

³³ See Tillemans 1999, chapter V.

calculus—as I have done—to elucidate the triple characterization, we may well need to see it as fully involving a type of logic of belief revision. This cannot be attempted here in anything but general themes for reflection. In any case, while determining what follows formally from what, or determining which statements are true, would be important in revising beliefs, they only represent part of the story. The larger problem being investigated by Indians and Tibetans is the *rational process* whereby an opponent’s existing belief states—a set of propositions some of which are *epistemically entrenched*, while others can be more or less doubted—meet new added information (a fact presented as a reason) and then change into new belief states. Up until now, the Indo-Tibetan *trairūpya* has been studied by and large as a fragment of formal thinking, with epistemic aspects seemingly more or less inessential *add-ons*.³⁴ Seeing the *trairūpya* as a fragment of a logic of belief revision would integrate those epistemic and rhetorical aspects that have hitherto been deemed secondary or have even been selectively disregarded.³⁵

Third, there is a significant metaphysical dimension to the Dharmakīrtian and Tibetan idea of a good reason. This is the requirement that there be a “necessary connection” (*sambandha, pratibandha*), i.e., a naturally existent, real connection (*svabhāvapratibandha*) of either causality (*tadutpatti*) or same nature (*tādātmya*) between the reason and the property to be proved (*sādhyadharmā*). It is supposedly in virtue of this connection that the debater can be *certain* that the pervasion holds. Thus, the metaphysical requirement is also implicit in the *Nyāyabindu*’s use of the proviso *niścita* (ascertained/assured). Yongs ‘dzin Phur bu lcog is more explicit in that he clearly specifies, in the third definition, that this ascertainment is by means of a source of knowledge (*tshad ma = pramāṇa*) grounded by a necessary connection (*‘brel ba = sambandha*).

That requirement, i.e., grounding of logical reasoning in necessary connections between terms, comes straight from Dharmakīrti but is *not*

³⁴ See, e.g., Chi 1969 or the articles of J.F. Staal on Indian logic, e.g., Staal 1962.

³⁵ This would, however, need an in-depth discussion that is best left to others. There is an extensive modern literature on the logic of belief revision, the seminal article being Alchourrón, Gärdenfors and Makinson 1985, the so-called “AGM theory.” For more recent developments and alternatives to AGM, see van Benthem 2007; see Hansson 2011 for a survey of logics of belief revision.

present in Dignāga's works. The natures (*svabhāva*) and their connections—to which a logician is ontologically committed as real facts—are what ensures the second and third characteristics, i.e., the pervasion. It is thus *the* ontological precondition for certainty (*niścaya*, *niścita*) and guarantees, in some sense, that the pervasion *must* hold, and not that it simply does hold *as far as we can see*. Another Dharmakīrtian way to put it is that the existence of real facts and the relevant connections between them ensures that the reason “operates due to real entities” (*vastubalapravṛtta*); reasoning is thus not an arbitrary process of freewheeling thought and language. It is no exaggeration to say that Dharmakīrti's demands for certainty, necessary connections, and grounding in reality are among his main positions in the Buddhist philosophy of logic.³⁶

6. Certainty, formal matters, and the *dGe lugs–Sa skya* debate on similar instances

Let it be granted that, besides logical or formal considerations, there are many *other aspects*—rhetorical, epistemic, factual, metaphysical—involved in the goodness of a reason, in both Indian and Tibetan philosophies of logic. Nonetheless, what can be said about the *implication* of the conclusion from the reason when the triple characteristic is satisfied and the reason is thus good? Is the truth of the conclusion guaranteed

³⁶ “Ascertainment,” “necessary connections,” reasons “operating due to real entities,” etc. are, for Dharmakīrti, the way to counter the position of Īśvarasena, the commentator on the *Pramāṇasamuccaya* who supposedly held that one could establish the general implication, i.e., pervasion, by simply not seeing any counterexamples (*adarśanamātra*). On Īśvarasena's positions, see Steinkellner 1966 and 1988, 1438 *et seq.* and n. 47. Note that Dignāga, in the *Pramāṇasamuccaya* passage quoted above, and especially according to the interpretation by his commentator Īśvarasena, does not have the idea of “ascertainment,” nor of “necessary connections” or reasons “operating due to real entities.” Although Dharmakīrti criticized Īśvarasena and *adarśanamātra* repeatedly, it is actually quite plausible that Īśvarasena got Dignāga pretty much right. Dharmakīrti, as is usual for an intelligent traditional author, disguised his own originality. There is an extensive literature on necessary connections/natural connections (*svabhāvavratibandha*) and their grounding of reasoning in Buddhist logic. The classic point of departure is Steinkellner 1971. See Steinkellner 1988 for the close connection with the idea of “ascertainment.” See Steinkellner 2015 on whether Dharmakīrti fell victim to the perennial difficulties of justifying induction.

by formal considerations when the three characteristics are established (and the premises are thus true), or is it at best fallibly established to be true in, let's say, normal situations? One way of interpreting Dignāga was indeed that the three characteristics were thought to be fallible in this way. We can see that the much-maligned Īśvarasena, who supposedly wrote a commentary on the *Pramāṇasamuccaya*, was quite aware that satisfaction of the triple characteristic would generally establish truth of the conclusion though there were some exceptional cases where it would not. Hence, he added three supplementary characteristics to rule out such abnormal cases.³⁷ If we adopt the official Dharmakīrtian line about certainty (*niścaya*), however, then fallible truths are not enough; truth of the conclusion should be guaranteed.

Indeed, there are several passages in the *Pramāṇavārttika*, notably chapter I.15, that clearly show that Dharmakīrti *thought* that Dignāga himself used or intended to use the term *niścaya/niścīta* in order to eliminate, *inter alia*, “deviant reasons” (*vyabhicāra*), i.e., those that did not guarantee the truth of the conclusion because the pervasion was not rigorously established.³⁸ The emphasis on certainty is so strong an imperative that Tibetan monastic textbook (*yig cha*) writers, like e.g., Se ra rje btsun Chos kyi rgyal mtshan (1478-1546), regularly also back-read Dharmakīrti's position onto Dignāga's texts, and argued that *niścaya/*

³⁷ A good reason for Īśvarasena, as we see from the discussion in Dharmakīrti's *Hetubindu* and many Tibetan Tshad ma commentaries, was thus one that had all six characteristics (*ṣaḍlakṣaṇahetu*); while satisfaction of the usual three was a necessary condition for goodness, it was not sufficient. The extra characteristics to be added besides the usual three are: *abādhitaviṣayatva* ([the reason's] not having as its object a [property] that is invalidated [by direct perception]), *vivakṣītaikasamkhyatva* (the fact that [the reason's] singularity is intended), *jñātatva* (the fact that [the reason] is known). For the *Hetubindu* sources, see Steinkellner 1967, Vol. 2, 70f. See Tillemans 1999, 53-55 for a summary of what we know about Īśvarasena and other (considerably more obscure) commentators on Dignāga—we also seem to have an Indian *Nyāyamukha* commentator known only as Mang po len pa'i bu (conjectured to be *Bāhuleya by Shigeaki Watanabe). It seems that Dharmapāla may well have written such a commentary, too.

³⁸ *Pramāṇavārttika* I.15: *hetos triṣv api rūpeṣu niścayas tena varṇitaḥ / asiddhaviparītarthavyabhicārivipakṣataḥ //*. “He [Dignāga] specified “certainty” in the three characteristics of the reason, too, in order to rule out non-established [reasons], [reasons that prove] the opposite proposition and deviant [reasons].”

niścita was actually present in the passage from the *Pramāṇasamuccaya* II.5 quoted above. That, however, is just not so: it is not there in the Sanskrit of that verse of *Pramāṇasamuccaya* nor in Dignāga's *Pramāṇasamuccayavṛtti*. Dharmakīrti added it in a kind of borderline plagiarism of that key *Pramāṇasamuccaya* passage in his *Pramāṇaviniścaya* so that he could better accommodate his own ideas about the needs for grounding of logical reasoning and the certainty ensured by natural connections (*svabhāvapratibandha*). Ever since the *Pramāṇaviniścaya*, Dharmakīrtian commentators such as Arcaṭa and Durvekamiśra, and notably Tibetans, have been doing a back-reading of Dignāga to say that it was there all along.³⁹ In fact, there is no convincing evidence that Dignāga was concerned with the grounding and metaphysical foundations of logic. The back-reading did not fit him easily at all.

Besides the Tibetan debates on the presence or absence of the “word *niścita*” (*nges pa'i tshig = niścitagrahaṇa*), however, there are other considerations that have a bearing on the question of the conclusion's truth being guaranteed. There are formal considerations. If we go back to the passages from Dignāga, Dharmakīrti, and Phur bu lcog, truth conservation depends upon how one takes the terms “similar instances” (*sapakṣa*) and “dissimilar instances” (*vipakṣa/asapakṣa*). This question is not explicitly discussed in India, but it is the subject of a significant debate between dGe lugs pa (and their gSang phu predecessors, the followers of Phya pa Chos kyi seng ge), on the one hand, and Sa skya pa on the other. Let us now look at the details of that dGe lugs-Sa skya debate. It is a debate that starts in the classical period with Sa skya Paṇḍita's *Tshad ma rigs gter* criticizing Phya pa and the gSang phu thinkers; it is then prolonged in the post-classical period in the writings of Go rams pa bSod nams Seng ge and those of dGe lugs pa writers like Se ra rje btsun Chos kyi rgyal mtshan, the former defending Sa skya Paṇḍita and the latter defending his opponents.

If we go back to Dharmakīrti's definitions of the three characteristics as given in *Nyāyabindu* II.5 (translated above), the reason is known to

³⁹ *Pramāṇaviniścaya* II.9: *anumeye 'tha tattulye sadbhāvo nāstitāsatī / niścita ... //*. See Steinkellner 1988, 1433 *et seq.* Page 1437, sums it up: “This definition makes literal use of Dignāga's famous definition... but it is not a quotation. It can be taken as Dignāga's, but it is not his, strictly speaking. ... [I]t is the final definition given by Dharmakīrti, but it looks as if it were composed by Dignāga.”

be only present (i.e., never absent) in the subject, or *pakṣa*, the reason is known to be present in only similar instances (*sapakṣa*), and the reason is known to be wholly absent from dissimilar instances (*vipakṣa*). Let us, for the sake of convenience, represent a typical argument in Sanskrit or Tibetan as having the general form *A* is *B* because it is *C*. In that case, to put it very approximatively, the first characteristic ensures that all *A*'s are *C*'s, while the remaining two conditions are designed to ensure that all *C*'s are *B*'s, all three of them enabling us to infer that all *A*'s are *B*'s.⁴⁰

However, an important controversy arises concerning the terms *sapakṣa* and *vipakṣa* in the second and third characteristics. Looking at Sa skya Paṇḍita's major work *Tshad ma rigs gter* and the dGe lugs *rTags rigs* literature, we see that there was a significant divergence on the issue of what Indians meant by "similar" and "dissimilar." Indeed these texts develop two scenarios, what I have called "the orthodox scenario," according to which similar and dissimilar instances excluded the subject (*dharmin*) and thus did not exhaust the whole universe of things about which we might reason, and the "unorthodox scenario," according to which the subject was included amongst the similar or dissimilar instances, respectively, these two exhausting the universe and admitting no third

⁴⁰ It has often been pointed that in each of the three characteristics there is an implicit universal quantification that is expressed by one of the three uses of the word "only" (*eva*) as developed by Sanskrit grammarians. See Kajiyama 1973, Gillon and Hayes 1982, Katsura 1986. Thus, for example, in Dharmakīrti's *pakṣadharmatva* definition the term *eva* (only) (Tib. *nyid* or *kho na*) is to be understood in the sense of *ayogavyavaccheda* (elimination of non-possession). This, as in the case of the other important use of *eva*, viz., *anyayogavyavaccheda* (elimination of possession of something else), can be fairly easily rendered in terms of a universally quantified material implication. Thus the *ayogavyavaccheda* use of *eva* between *S*[*ādhyadharmā*] and *R*[*eason*], as in "R is only present (and never absent) in S" can be rendered by: $(x) (Sx \rightarrow Rx)$. The *anyayogavyavaccheda* use of *eva* between *S* and *R*, as in "R is present in only S (and is thus not present in non-S's)," can be rendered as: $(x) (Rx \rightarrow Sx)$. The direction of the material implication is now reversed. The first use of *eva*, i.e., *ayogavyavaccheda*, figures in the *pakṣadharmatva*. The second use of *eva*, viz., *anyayogavyavaccheda*, figures in the *anvayavyāpti*. See Kajiyama 1973 and Tillemans 2000, 64 n.226 for the usual grammatical examples of the two types of elimination, "Caitra is an archer" (= Caitra is only an archer and not a non-archer) and "It is Pārtha [alone] who is the archer" (= Pārtha is the only archer amongst the Pāṇḍava brothers; no-one else is a real archer).

alternative.⁴¹ In brief, the orthodox scenario leads to a tripartite division of the universe into (1) the set of similar instances, $\{x: Bx \ \& \ \neg Ax\}$, i.e., the set of all those things x that have the property B but not A . (2) the set of dissimilar instances, $\{x: \neg Bx \ \& \ \neg Ax\}$, i.e., all those things x that do not have B and do not have A . (3) the set of things that are the subject, i.e., $\{x: Ax\}$. The unorthodox scenario in effect is an advocacy of bipartition: there is no third alternative apart from the similar and the dissimilar instances; the similar instances are simply $\{x: Bx\}$ and the dissimilar instances are $\{x: \neg Bx\}$.

Now, whereas the orthodox scenario is plausibly ascribed to Dignāga,⁴² the unorthodox scenario is especially what we find in later Indian texts of the so-called “intrinsic pervasion” (*antarvyāpti*) school, such as the *Antarvyāptisamarthana* of the tenth century thinker Ratnākaraśānti.⁴³ The opponents of Sa skya Paṇḍita were characterized in his *Tshad marigs gter* as followers of *antarvyāpti* (*nang gi khyab pa*). This seems to have been on the mark, for we can see that the dGe lugs pa and Phya pa Chos kyi seng ge indeed do use Ratnākaraśānti’s definitions of similar and dissimilar instances, and that they are exponents of the unorthodox scenario (although they do *not* endorse the key tenet of *Antarvyāptivāda* that examples are dispensable when arguing with intelligent people).⁴⁴ An interesting question—which, alas, I cannot take up here but have discussed elsewhere—is how we should situate Dharmakīrti.⁴⁵ In any case, whether rightly or wrongly, the Sa skya pa interpret him (and Dignāga) as following the orthodox scenario, and the dGe lugs take him (and Dignāga) as following the unorthodox.

The problems for the orthodox scenario are formal. Here is what those formal issues look like. Let C be the reason, A the subject property and B the property to be proved. For simplicity, let us simply take the term A as a general term—if we want to take it as a particular that adaptation

⁴¹ Tillemans 1999, chapter V. See Katsura 2005 for analysis of what Dignāga himself meant by *pakṣa*, *sapakṣa*, *vipakṣa/asapakṣa*.

⁴² See Katsura 2005 for the actual Dignāgan sources.

⁴³ See Kajiyama 1999 for a translation of this work. See Kajiyama 1958, Mimaki 1976, Bhattacharya 1986 and Tillemans 2004 on *antarvyāptivāda*. On Ratnākaraśānti’s dates and chronological relation to Jñānaśrīmitra and Ratnakīrti, see Mimaki 1992.

⁴⁴ See Tillemans 1999, chapter V, “On *sapakṣa*.” See Hugon 2008, Vol. 1. 278-279.

⁴⁵ See Tillemans 2004.

can be made. The two scenarios can be best differentiated by formulating the second characteristic along the lines of “all *C*’s *apart from those that are A* are *B*’s” and “all *C*’s are *B*’s” respectively. The difference applies *mutatis mutandis* to the third characteristic. We represent the universal quantifier “For all *x*: ...” by “(x) (...)” and material implication (“if ... then ...”) by “→.” Here then are the two scenarios concerning the triple characterization:

(a) Orthodox

$$(x) (Ax \rightarrow Cx)$$

$$(x) ((Cx \ \& \ \neg Ax) \rightarrow Bx)$$

$$(x) (\neg Bx \ \& \ \neg Ax) \rightarrow \neg Cx)$$

(b) Unorthodox

$$(x) (Ax \rightarrow Cx)$$

$$(x) (Cx \rightarrow Bx)$$

$$(x) (\neg Bx \rightarrow \neg Cx)$$

It is clear that on scenario (a), the conclusion $(x) (Ax \rightarrow Bx)$ does not follow from the three statements,⁴⁶ whereas on scenario (b) it uncontroversially does. We could say that the three statements in (a), if true, might provide some fallible grounds for thinking that the conclusion is true but that there is nonetheless no guarantee that it *is* true. This is because $(x) (Ax \rightarrow Bx)$ is not formally implied; it cannot be derived from the other three statements. At most, the move to the conclusion would be a defeasible inference, one that would be tentative and might be retracted once further information became available. In (b), however, the truth of the conclusion would be guaranteed as the statement is formally implied and easily derivable; there is thus no possibility of the inference subsequently being revised because of new

⁴⁶ E.g., take the property *A* as “being an odd positive integer,” for *B* take “being divisible without remainder by 2,” and for *C* “being a natural number.” Buddhist pseudo-mathematicians might then argue that all odd positive integers are divisible without remainder by 2 because they are natural numbers. They could claim that the reason satisfies the triple characteristic taken in the orthodox manner. However, they would be going from true premises to a false conclusion. While it is true that all odd positive integers are natural numbers and true that all natural numbers apart from the odd positive integers are divisible by 2, it is obviously not true that all odd positive integers are divisible without remainder by 2.

information. That difference with regard to defeasibility is also sometimes spoken of as a difference between non-monotonic and monotonic logics, or, less precisely, between inductive and deductive logics.⁴⁷

If we accepted (b) as capturing the *trairūpya*, there would be no problem in seeing a good reason as guaranteeing truth of the conclusion. And for the dGe lugs pa there is indeed no problem with this. The Sa skya pa, however, had some major exegetical conundrums.⁴⁸ On the one hand, it seems to be so, as the debate shows, that similar instances and dissimilar instances for Dignāga were easily and naturally interpreted along the lines of (a). At least it is demonstrable that some very competent logicians in seventh century India *did* interpret Dignāga's logic in this way. When, for example, the Chinese pilgrim Xuanzang used Dignāga's logic of triply characterized reasons to frame a tortuous proof of idealism, his proof is *only* intelligible, as Franco 2005 convincingly shows, if we take similar and dissimilar instances in the orthodox fashion, i.e., as excluding the subject.⁴⁹ It seems clear that the logic on which the argument was based was not an idiosyncratic invention of Xuanzang himself nor a purely Chinese development; it reflected a going Indian interpretation of Dignāga.

Nonetheless, there are problems in saying that for Dignāga *himself*, the satisfaction of the triply characterized reason, as in (a), could have provided only a *fallible* justification for the claiming the conclusion to be true, or that Dignāgan logic is therefore non-monotonic/inductive, while Dharmakīrti's logic is monotonic/deductive.⁵⁰ I now think that

⁴⁷ See Strasser and Antonelli 2014: "The term "non-monotonic logic" ... covers a family of formal frameworks devised to capture and represent *defeasible inference*, i.e., that kind of inference in which reasoners draw conclusions tentatively, reserving the right to retract them in the light of further information. Examples are numerous, reaching from inductive generalizations to abduction to inferences on the basis of expert opinion, etc. We find defeasible inferences in everyday reasoning, in expert reasoning (e.g., medical diagnosis), and in scientific reasoning."

⁴⁸ Tillemans 2005, "The Slow Death of the *Trairūpya* in Buddhist Logic: A propos of Sa skya Paṇḍita."

⁴⁹ Oetke 1994, 17-73 also argues for taking Dignāga in this orthodox way.

⁵⁰ See Oetke 1996 for an interpretation of Dignāga's logic as non-monotonic and *not* involving guaranteed truth conservation. In Tillemans 2004 I adopted the Sa skya viewpoint on Dignāga, seeing him as adhering to tripartitionism and hence to a more inductive logic that allowed for defeasibility.

unfortunately one cannot be so categorical in this fashion about Dignāga, even if we probably can continue to use those terms to characterize the logic of Dharmakīrti and his successors.

My reluctance is for the following two reasons. First of all, some later Sa skya pa Rigs gter ba writers such as Glo bo mkhan chen Bsod nam lhun grub (1456-1532) were aware of the problem that Dignāga seemed to advocate a tripartite universe, but that it would come with the unacceptable price that a triply characterized reason did not entail its conclusion. They thus made a distinction between similar instances taken epistemically, or subjectively (*blo ngor gnas pa'i mthun phyogs*), and similar instances as they are in reality, or objectively (*don la gnas pa'i mthun phyogs*). To take the sound-impermanent example, the first is the set of all things that the debaters *know* to be impermanent. Since they wonder whether sound is in fact impermanent, sound is excluded from those known impermanent entities. The second is what is really so, irrespective of what debaters may think; thus, in this sense, sound is actually included amongst the similar instances because it is an impermanent thing. In short, the orthodox account would focus on epistemology and epistemic processes of how people reason, whereas the unorthodox account would better capture the logical aspects of what follows from what.

Secondly, it is now clear, thanks to the detailed study of Shōryū Katsura 2005 on Dignāga's use of the terms *pakṣa*, *sapakṣa*, and *asapakṣa/vipakṣa*, that Dignāga himself tried to distinguish both the epistemic/subjective and the logical/objective perspectives in his use of the key terms. It seems then that the diagnosis by Glo bo mkhan chen of two senses is on the mark and helpful in understanding Dignāga.⁵¹ As Katsura 2005, 124 hypothesizes, while Dignāga's subjective interpretation of "similar instances" was captured by the orthodox tripartite division of the Rigs gter ba, the objective bipartite division that he also accepted may have contributed

⁵¹ The dGe lugs pa 'Jam dbyangs bzhad pa, on the other hand, distinguished between "similar instances" taken etymologically (*mthun phyogs la sgra bshad du 'jug pa*) and "similar instances" properly speaking. The former were those things *similar* (*samāna*) to the subject, sound, in being impermanent, like vases and so forth. But sound cannot be said to be similar to itself in being impermanent and thus is not a similar instance taken in the etymological fashion. See Tillemans 1999, chapter V. Sa skya Paṇḍita and his Rigs gter ba followers have this semantic argument too, but it is the epistemic considerations that carry more weight for them.

to the unorthodox bipartite division promulgated by Dharmakīrti, the Antaryvāptivādins, and the dGe lugs pa. In that case, the modern researcher wondering whether Dignāga's own *trairūpya* promoted non-monotonic or monotonic logic, or one that was inductive or deductive, etc., would have to content herself with the somewhat unsatisfying (but historically right) answer that the *trairūpya* for Dignāga was a mixture of *both*—it all depended on whether you read the terse formulae about similar and dissimilar instances from the logical or epistemic perspectives.

That being said, Sa skya Paṇḍita (Sa paṅ) no doubt emphasized the epistemic perspective and thus the orthodox reading of the Indian *trairūpya*'s talk about similar and dissimilar instances.⁵² That is how he talks in *Rigs gter* about *pakṣa*, *sapakṣa*, and *vipakṣa* and that is how he and the Rigs gter ba were read by their dGe lugs pa adversaries, such as Se ra Chos kyi rgyal mtshan.⁵³ The problem for the Sa skya pa was, however, that he, like Phya pa and the dGe lugs pa, demanded guaranteed truth conservation of the conclusion—it had to follow formally from true premises. This was the Dharmakīrtian stance, and both sides in the Tibetan debate adhered to it. Not surprisingly, then, given that Sa paṅ must have been sensitive to the formal problems of entailment in the tripartite universe, he chose a very different exegetical route to specify the logical and objective aspects of a triply characterized reason more precisely. The Indian *trairūpya* was drastically revamped and no longer formulated in terms of presence in similar instances and absence in dissimilar instances at all. Instead, he and his Sa skya pa followers reformulated the second and third characteristics to be simply that the property to be proved must be implied by the reason and that the reason must be absent when the property is. This is an unconvincing rewrite of the attested canonical formulations of the Indian Buddhist *trairūpya*—it is part of the “slow death” of the Indian *trairūpya* in Tibet—but shows, if more evidence were ever needed,

⁵² See Hugon 2008, Vol. 1, 291-296. And if we wish, we could say that on Sa paṅ's reading of Dignāga, the *trairūpya*'s talk of similar and dissimilar instances did lead to a non-monotonic logic. The caveat, of course, is that Dignāga's own thinking seems to have been a bit more elusive than Sa paṅ might have thought.

⁵³ For a French translation of the section of *Rigs gter* chapter X that contains the relevant passages on *pakṣa*, *sapakṣa*, and *vipakṣa*, see Hugon 2008, Vol. 2. For Se ra Chos kyi rgyal mtshan's depiction of the Rigs gter ba position in his *rNam 'grel spyi don*, see Tillemans 1999, 97-99.

just how uneasy the inherited Indian position was for Tibetans.⁵⁴ In Sa paṅ's eyes, the price to be paid to save the *trairūpya* as a definition of a good reason that entailed the conclusion was that he had to make a clean sweep of the old Indian definition. He had to relegate talk of similar and dissimilar instances to epistemology and then do logic with a new version that simply dispensed with them.

7. Deviant logic? The tetralemma and the law of double negation elimination in Tibetan Madhyamaka

It is frequently wondered whether the formal structures in Indian and Tibetan Buddhism represent a type of radically different logic, or “deviant logic,” one that does not respect fundamental theorems of classical Western logic.⁵⁵ Whereas the *trairūpya*, in India and in Tibet, clearly does not suggest any such deviance, the argumentation concerning the tetralemma (*catuṣkoṭi*) might. The tetralemma is found in numerous texts of the so-called school of the “Philosophy of the Middle” (*madhyamaka* = *dbu ma*),⁵⁶ and although it is not used by the major figures in Indian Pramāṇa literature, Tibetans tended to synthesize Madhyamaka and Pramāṇa so that what they held about one tradition affected, in varying degrees, what they held about the other.

Here is how the recurring schema of four alternatives, or the tetralemma, is presented in verse 21 of chapter XIV of Āryadeva's *Catuḥśataka*:

*sad asat sad asac ceti sadasan neti ca kramah / eṣa prayojyo vidvadbhir
ekatvādiṣu nityasāh /.*

“Existent, nonexistent, both existent and nonexistent, neither existent nor nonexistent, that is the successive method that the learned should always use with regard to oneness and other such [theses].”⁵⁷

⁵⁴ See Tillemans 2005, Hugon 2008, 291 *et seq.* for the details of the Sa skya pas' solution and exegetical strategies.

⁵⁵ The term “deviant logic” is that of Susan Haack. A logic *L1* is deviant relative to *L2*, if *L1* has the same formulae and logical vocabulary as *L2* but nevertheless does not have the same set of theorems as *L2*. For our purposes we will take *L2* as classical logic. See Haack 1974, chapter I.

⁵⁶ See Seyfort Ruegg 2010, 37–112.

⁵⁷ Text in Seyfort Ruegg 2010, 49.

The Philosophy of the Middle, starting with the second or third century C.E. thinkers Nāgārjuna and Āryadeva, regularly uses this schema, or a partial version of it, to dismiss all philosophical theses (*pakṣa, pratijñā* = *phyogs, dam bca'*) and thus arrive at a quietist stance of “no more discursive proliferations” (*niṣprapañca = spros bral*)—a Mādhyamika thinker supposedly negates all four lemmas, and this with regard to any philosophical position presented. In short, we are supposed to negate any assertion of being, non-being, both, and neither, including oneness, not-oneness, both, neither, and every other such proposition in its four alternatives. Granted the last two lemmas are frequently left out and one often speaks simply of negating the first two, i.e., “existence” and “nonexistence,” with all other attributes in philosophical debates negated *mutatis mutandis*. And this twofold negation yields the famous middle way (*madhyamā pratipad = dbu ma'i lam*). Things do not stop at the first two negations, however. Lest it be thought that “neither existent nor nonexistent” is the final view on how things are in reality, this lemma is negated too. How that path to thesislessness is to be interpreted and practiced is a major theme in Tibetan Buddhism.⁵⁸

Now, *prima facie* at least, the fourfold negation of the lemmas of “existence/being,” “nonexistence/non-being,” “both,” and “neither” would seem to result in a *very* deviant Buddhist logic. To put things in terms of propositional calculus, the four negations would seem to yield the conjunction of the following four statements:

- (a) $\neg P$
- (b) $\neg \neg P$
- (c) $\neg(P \ \& \ \neg P)$
- (d) $\neg(\neg P \ \& \ \neg \neg P)$ ⁵⁹

⁵⁸ For the basics of the Madhyamaka use of the tetralemma in its philosophy of emptiness (*śūnyavāda*), see Seyfort Ruegg 2010, chapter III; see also Tillemans 1999, chapter IX. For a philosophical analysis of Madhyamaka thesislessness and quietism, see the introduction and chapter XII in Tillemans 2016. For the question of acceptance of the law of non-contradiction, see chapters III and IV.

⁵⁹ *d* is presented as a negation of a conjunction, but it could also be taken as a negation of a negated disjunction. In short, the last negative proposition, (e.g., not neither existent nor nonexistent) could also be reformulated by De Morgan’s laws as $\neg(P \vee \neg P)$.

Notably, the law of non-contradiction seems to be violated if we apply the law of double negation elimination to (b) (i.e., $\neg\neg P$) and then adjoin (a) (i.e., $\neg P$) to the result of that elimination. We end up simply with $\neg P \ \& \ P$, a contradiction. It doesn't stop there: adjoining (c) to $P \ \& \ \neg P$ would yield $(P \ \& \ \neg P) \ \& \ \neg(P \ \& \ \neg P)$. And so on it goes. That specter of deviance did not go unnoticed in Tibet, where, as in India (at least from about the fifth century C.E. on), there were strict, explicit prohibitions against contradiction (*virodha* = 'gal ba). Indo-Tibetan Buddhist logicians spoke of propositions that were “mutually contradictory” (*parasparaviruddha* = *phan tshun spangs* 'gal), and if one asserted such a “mutual contradiction” it was a point of defeat (*nigrahasthāna* = *tshar gcod kyi gnas*).⁶⁰

Two moves suggest themselves to enable Buddhists to avoid contradiction in the fourfold Madhyamaka reasoning. First, they could reinterpret the negation operator so that the law of double negation elimination would not apply in these discussions. Negation here would be a kind of “mere denial” without any implied positive assertion, so that $\neg\neg P$ would not imply P ; the adjoined negations would remain mere denials and would not yield any positive assertion of P that could be adjoined with $\neg P$. The second move is to add parameters to the various propositions so that the appearance of contradiction is dissipated.

Both these moves were present to varying degrees in Indian Madhyamaka discussions. The first move to interpret tetalemma-style

⁶⁰ To take an example from Indian Madhyamaka, Nāgārjuna, in *Mūlamadhyamakakārikā* XXV.14 gives what looks like a clear version of that prohibition against asserting the adjunction of P and $\neg P$: *bhaved abhāvo bhāvaś ca nirvāṇa ubhayaṃ katham / na tayoṛ ekatrāstitvam ālokatamasor yathā* //. “How could both non-being and being pertain to *nirvāṇa*? Just like light and darkness, both are not present in one place.” Even more explicit in banning such “mutual contradiction” is Candrakīrti's *Prasannapadā* commentary on this verse: *bhāvābhāvayor api parasparaviruddhayor ekatra nirvāṇe nāsti sambhava iti // bhaved abhāvo bhāvaś ca nirvāṇa ubhayaṃ katham / naiva bhaved ity abhiprāyaḥ* /. “For being and non-being, too, there is no possibility for the two mutually contradictory things (*parasparaviruddha*) to be present in one place—that is, in *nirvāṇa*. Thus ‘how could both nonbeing and being pertain to *nirvāṇa*?’ The point is they could not at all.” The argument is situated in the context of the fourfold negation of the tetalemma (*catuṣkoṭi*), where an opponent suggests that *nirvāṇa* both is and is not; in short, the opponent asserts the adjunction of “is” and “is not.” Nāgārjuna and Candrakīrti reply that such an adjunction is not possible. See Tillemans 2016, 74-75.

negation as “mere denial” (*pratiṣedhamātra* = *dgag pa tsam*) dates from the sixth century Mādhyamika Bhāviveka’s appropriation of two types of negation in Indian logic, viz., implicative (*paryudāsa*) and non-implicative (*prasajya*), the latter being a negation that does not imply any positive phenomenon (*vidhi*). The second move is not given a developed theoretical treatment in India but figures, at least implicitly, in Indian Madhyamaka uses of qualifiers like *svabhāvena* (by its intrinsic nature), *paramārthatas* (ultimately), *satyatas* (truly, really), and other terms that are understood equivalently.

Both moves stimulated significant debate and philosophical reflection in Tibet.⁶¹ In particular, we find major figures of the dGe lugs and Sa skya traditions arguing as to precisely how we should interpret the “mere denial” sort of negation and whether or not it obeys the law of double negation elimination. For the Sa skya pa it does not obey the law of double negation elimination, whereas for the dGe lugs pa it most certainly does.

We also find debates between these two traditions about whether the statements of the tetralemma should be explicitly parameterized. The dGe lugs pa have a sophisticated position where they maintain that instead of understanding, say, the first lemma as “... exists,” it should be understood as “... exists by its intrinsic nature” (*rang bzhin gyis*) or “... exists ultimately” (*don dam par*), “... exists truly (*bden par*),” etc., These qualifiers can be represented with a term of art, the operator “REALLY.”⁶² Thus, (a) and (b) would become, respectively:

(e) \neg REALLY P

(f) \neg REALLY \neg P

⁶¹ See Tillemans 2016, chapter VII for the debate between the Sa skya pa Go rams pa bSod nams seng ge (1429-1489) and the dGe lugs pa mKhas grub rje (1385-1438) on double negation elimination in the tetralemma. In what follows, when I speak of the dGe lugs–Sa skya debate, I am referring primarily to the clash of views between these two Madhyamaka traditions as found in Go rams pa’s *lTa ba’i shan byed*, mKhas grub rje’s *sTong thun chen mo* and Tsong kha pa’s *rTsa she ’ik chen*. See *op. cit.* chapter VII for the textual material. I also take up, in that publication, the serious misunderstanding of the fourth lemma as “not both ...” rather than “neither ... nor ...”. Both sides made that mistake and it often rendered their versions of the fourth negation confused. On the dGe lugs pa and Sa skya pa positions on parameterization, see *op. cit.* chapters III and IV.

⁶² “REALLY” was used in this way in Priest, Siderits, Tillemans 2011.

There would be no contradiction in asserting both (e) and (f) to arrive at a middle way where P may be true but “REALLY P ” is not true and “REALLY $\neg P$ ” is not true either. Double negation elimination need not be rejected, because there is no threat at all that REALLY P will follow from \neg REALLY $\neg P$. Indeed, the philosophical upshot of the tetralemma negations would just be that no statement or its negation is ever true when prefixed with the REALLY operator.⁶³

The dGe lugs pa Madhyamaka-style negation of qualified statements is thus a frontal attack on metaphysical realism and ontology, but it does not exclude accepting and arguing for the truth of unqualified statements. One can, in effect, claim the truth of “The world is round,” “Enlightened people exist,” or “There are no three positive integers a , b , and c that satisfy the equation $a^n + b^n = c^n$ for any integer value of n greater than two.” Such truths may sometimes be obvious and sometimes profound and elusive, but for those statements to be true one need not, and indeed cannot, claim the truth of “It is REALLY so that the world is round,” “It is REALLY so that there are no three positive integers, etc.” The Sa skya pa, on the other hand, maintains that the statements in the tetralemma should not be parameterized at all. Given that the goal of the Madhyamaka, for them, is a completely irenic state where one makes no truth claims whatsoever, qualification would run counter to that goal, for if the tetralemma’s statements were qualified one could still claim a proposition P to be true and argue strenuously for it—as did the dGe lugs pa—and hence be irremediably lost in “discursive proliferations.”

The key technical term in this dGe lugs pa-Sa skya pa argument is *dgag pa gnyis kyis rnal ma go ba*, literally “understanding the main [proposition] by means of two negations.” It is not difficult to see that this is indeed a law of double negation elimination. The term is found in early *Pramāṇaviniścaya* commentaries, such as that of rNgog lo tsā ba Blo ldan shes rab (1059–1109), and also figures regularly in Tsong kha pa’s Madhyamaka texts, such as his commentary on the *Mūlamadhyamakakārikā*, his *rTsa she ĩk chen*. It is not itself an original Tibetan idea, but can be traced back to Indian

⁶³ This, however, takes on significance and is not just a refutation of a “straw man,” because, according to Madhyamaka, philosophers (and even the common man) are supposedly wrongly attracted to a type of metaphysical realism that conceives of things as established by their intrinsic natures, ultimately, etc.

Buddhist logic, the Sanskrit original *pratiṣedhadvayena prakṛtagamana* being found in the third chapter of Dharmakīrti's *Pramānaviniścaya*.⁶⁴ There are also Indian uses of the same or equivalent terms in non-Buddhist texts—like Kumāri's *Śloka-vārttika Nirālambanavāda* 125, which uses *pratiṣedhadvayāt vidhir eva* (“The positive does indeed come from the double negation”)—as well as in Indian Madhyamaka texts such as Candrakīrti's *Prasannapadā* on *Mūlamadhyamakakārikā* 4.5ab, and especially Bhāviveka's *Prajñāpradīpa* (D. 80a7) and Avalokitavrata's *Prajñāpradīpaṭīkā* (D. 180b3). But although double negation elimination does seem to be invoked on relatively rare occasions in those Indian Madhyamaka commentaries, it is not at all clear whether the Mādhyamika himself endorses it as a *universally applicable logical law*, or whether he restricts it to implicative negations, or just uses it in certain situations as a rhetorical stratagem that is recognized by the opponent.

The interest of the Tibetan debate is that it takes up this very issue, one that was philosophically crucially important but was still probably quite unclear in India. In sum, for the Sa skya pa, the rejection of double negation elimination is *essential* to the Madhyamaka goal of thesislessness; logic admits of exceptional rejections of some classical theorems; a Mādhyamika supposedly makes “mere denials” but never makes any positive truth claims; parameterization does no work here and is in fact an obstacle. For the dGe lugs pa, by contrast, parameterization is the key; the issue of double negation elimination is irrelevant; the logical features of the tetralemma and non-implicative negation are thus taken to be unexceptionably classical. Tibetan positions on these issues thus concern the most basic matters of Madhyamaka quietism.

8. Semantic issues: Indians and Tibetans on referential opacity and intensional entities

As a final subject in our exposé on Tibetan developments of Indian Pramāṇa debates, we turn to an important logico-semantic issue connected with Dignāga and Dharmakīrti's *apoha* (exclusion) theory of meaning. This semantic problem, similar to Western debates concerning substitution of

⁶⁴ See PVin III, in edition of Hugon and Tomabechei 2011, 120.10-11: *asapakṣa eva nāstīti cāsya sapakṣe 'stitocyate / pratiṣedhadvayena prakṛtagamanāt /*.

identicals for identicals in opaque contexts, was regarded as crucial for logic, both in India and Tibet, because it was thought that failure to find an acceptable solution threatened the possibility of logical reasoning across the board. In short, Dharmakīrti and Tibetans characterized the semantic solutions as necessary conditions for the legitimacy of one of the Buddhist sources of knowledge, inference (*anumāna*). Here are the Indian basics and the Tibetan developments.

Buddhist logicians knew well that pervasion (*vyāpti* = *khyab pa*) between two terms *F* and *G* sometimes holds in only one direction, as in the case of “being a tree” and “being a *śiṃśapā* tree”—all *śiṃśapās* are trees, but obviously not all trees are *śiṃśapās*—and that sometimes pervasion is bidirectional. The former case is analysable as a universally quantified material implication, i.e., a conditional like *for all x: if x is a śiṃśapā then x is a tree*, while the latter case, termed “equal pervasion” (*samavyāpti* = *khyab mnyam*), is, in effect, analysable as a universally quantified biconditional, *for all x: x is F if and only if x is G*. In India, and in Tibet, semantic problems then arise in cases of a bidirectional pervasion, like that between impermanence (*anityatva* = *mi rtag pa nyid*) and being causally produced (*kṛtakatva* = *byas pa nyid*), where in effect (adopting the above analysis) we have a true biconditional, *for all x: x is impermanent if and only if x is causally produced*. Tibetans will then say that given this bidirectional pervasion, the terms are therefore coextensive. Indeed, Tibetans regularly use the technical term *don gcig* (literally: same objects) for this extensional identity of *F* and *G* and speak of “eight types of pervasions” (*khyab pa sgo brgyad*) holding between *F* and *G* when they are the “same objects”: (1-2) a bidirectional pervasion using the copula “is” (*yin*); (3-4) its two contrapositions; (5-6) a bidirectional pervasion using the existential verb *yod* (“There is...”); (7-8) its two contrapositions.⁶⁵

When there is extensional identity between *F* and *G*, a problem of substitutivity then arises. It can be unpacked in the following manner with the use of a few familiar notions and principles. Although the extension of terms may be the same (e.g., the set of impermanent particulars = the set of causally produced particulars), still in some contexts substitutivity of

⁶⁵ The Sanskrit *ekārtha* is not so technically precise and is often used simply to mean “same meaning.” See the quotation from Dharmakīrti’s *Svavṛtti* below in section 8 and n. 68.

one term for the other would seem to lead to an invalid inference where the premises are true but the conclusion is not. To bring this out, take the following tempting, but invalid, inference:

- (a) Being a product is a good reason for proving that sound is impermanent
- (b) Being a product is coextensive with being impermanent (i.e., for all x: x is impermanent if and only if x is a causal product)
- (c) Therefore (by substitutivity of identicals for identicals), being impermanent is a good reason for proving that sound is impermanent.

We would seem to go from two true premises to a false conclusion, for Buddhists are explicit on the point that the conclusion is false. (Indeed, arguing that something is so because it is simply so is *not* giving a good reason, neither for Buddhists nor for most people in the world!) Buddhists, however, as we saw in discussing the definitions of the triple characteristic, would phrase the problem in terms of the *jijñāsā/shes 'dod*, “desire to know” becoming impossible: it is impossible to know that sound is impermanent and still want to know whether sound is impermanent; the *paśadharmatva* would thus fail, because once one understood the reason as qualifying the subject, that subject would not be a *jijñāsītadharmin/shes 'dod chos can*, i.e., a subject about which one wishes to know whether it is qualified by the property to be proved. And yet we would also seem to be using an acceptable principle of substitutivity of identicals for identicals *salva veritate*, i.e., with no change in the truth value of the proposition in which such substitution occurs. What went wrong? Is Leibniz’s famous law of substitutivity of identicals *salva veritate* not recognized? Or, if it is—and in fact it *is* recognized by Buddhists, in that they themselves take coextensiveness of “being a product” and “being impermanent” as being a form of identity and licencing substitution of the property terms in many contexts—then why does it not apply here?

Dharmakīrti, in *Pramāṇavārttika* I verse 40 *et seq.* and his own commentary (*svavṛtti*) diagnosed the problem as one of bidirectional pervasions (i.e., coextensive concepts) seeming to force us to accept *pratijñārthaikakadeśahetu* “reasons that are one part of the thesis-proposition” (e.g., when one says “sound is impermanent, because it is impermanent,” then the reason “being impermanent” is also a part of what is being proved). He saw this undesirable consequence as one of the main challenges to logical thought being a source of knowledge (*pramāṇa*), for unless one can somehow rule out the problematic substitutions in what I

have called the “tempting inference,” we would seem to have to accept as good a huge number of singularly uninformative circular reasons.

The issue is indeed a recognizably familiar one in formal semantics and in philosophy of logic and language: substitutivity in referentially opaque contexts, such as propositional attitudes and modal contexts (see Tillemans 1986). One might know who Kim Philby was but not know who was the leader of the infamous Cambridge Five spies. Though it is so objectively that Kim Philby = the leader of the Cambridge Five spies, the reference of the two terms is opaque in typical belief contexts, in that using “the leader of the Cambridge Five spies” instead of “Kim Philby,” or vice versa, may well yield a false sentence. Likewise, talk of good reasons being ones where the debater has a desire to know P but not an equivalent P^* that is different from P only in substituting a new term for identical entities, is indeed an opaque context. To analyze what goes wrong in the tempting inference, Dharmakīrti, in effect, made a usual move by distinguishing between types of identities: “being impermanent” and “being produced” are extensionally identical, but somehow not intensionally so. He speaks of the expressions making us understand differences and individualities; the concepts—more literally, in his *apohavāda* jargon, the “exclusions” or “isolates” (*vyāvṛtti* = *ldog pa*)—are different. The point is that, in the opaque context, substitution could only be made between terms for identical concepts and not between terms that just happen to refer to the same entities in the world.

In fact, though, it could be objected that the usual idea of an intensional identity (one that is understood to hold between properties F and G when the biconditional *for all x : x is F if and only if x is G* is true in all possible worlds)⁶⁶ will not get us very far out of the woods, as being impermanent and being produced *are* arguably identical in that way. And it would thus seem that if *that* was what conceptual identity was about for a Buddhist epistemologist it should have *been* possible to make the substitution in the opaque contexts under discussion. Dharmakīrti’s idea of concepts F and G being identical thus demands a much stronger criterion than the necessary truth of the biconditional *for all x : x is F if and only if x is G* . If that latter necessary truth is the criterion for identity between F and G , when taken as intensions, then we would seem to be forced to accept “ultra-intensional” entities where the identity criterion would have to be even stronger.

⁶⁶ See, e.g., Carnap 1956, chapter I, “The method of extension and intension.”

In dGe lugs pa commentaries to verse 40 and in the Tibetan *Collected Topics* (*bsdus grwa*) literature, probably indebted to the Phya-tradition, we find the makings of an idea of “conceptual identity/difference” (*ldog pa gcig/tha dad*) such that to each meaningful subject or predicate term in a language there is a different concept—synonyms (*ming gi rnam grangs*), for example, will still express different concepts (*ldog pa tha dad*). Thus, for example, we find a telling passage from Yongs ‘dzin Phur bu lcoḡ, which I will translate in full:

“An opponent says that *real entity*, *impermanent*, *product*, and *composite*, as they are simply a group of synonyms, are all identical (*gcig*). Analogously, *knowable thing* (*shes bya*), *existent* (*yod pa*), *established basis* (*gzhi grub*) and *discriminable entity* (*gzhal bya*) are also identical. Just as, for example, the Incomparable Son of Śuddhodana, the Omniscient One of the Solar Line, and the Omniscient Sugar Cane One [are identical]. [We reply:] This is incorrect, because the Son of Śuddhodana, the One of the Solar Line, and the Sugar Cane One are all different (*tha dad*). If [you say that the reason is] not established, we affirm that it does follow [that the Son of Śuddhodana, etc. are different], because it is possible that one might ascertain, with a source of knowledge, to which basis one applies the words “One of the Solar Line” and “Sugar Cane One,” even though one does not ascertain, with a source of knowledge, to what one applies the words “Son of Śuddhodana.” Therefore, although the basis [i.e., the actual person] for applying the names “Son of Śuddhodana,” “One of the Solar Line,” and “Sugar Cane One” is identical, they [i.e., the Son of Śuddhodana, etc.] are not identical; if they were identical, they would have to be identical both in name and meaning.”⁶⁷

There are use-mention problems here but the idea is still understandable: the fact that the names differ for the same actual person, i.e., Buddha Śākyamuni, allows us to say that Son of Śuddhodana, One of the Solar

⁶⁷ This passage from *Yongs ‘dzin bsdus grwa chung* (12b) is discussed extensively in Tillemans 1986, 211-213. See *ibid.* n. 19 for the Tibetan. I have italicized “impermanent,” “composite,” etc. to alert the reader to the fact that these terms cannot easily be rendered into correct English. Such translational problems are taken up in detail in the last section of the next chapter.

Line, etc. are themselves different (*tha dad*). The same type of difference holds between being impermanent and being produced. In short, following the dGe lugs pa text cited above, the substitution in the problematic inference would be blocked by saying that being impermanent and being produced are not actually identical after all, but are somehow different.

Now, it will be said that it is quite counterintuitive that synonyms would nonetheless express different concepts. As Stoltz 2008 points out, there were also some Tibetans, including even Phya pa himself, who said that terms like *shing* and *ljon pa* (two words translatable as “tree”) expressed the *same* concept (*ldog pa gcig*). In that sense, there was no complete unanimity amongst Tibetans, and some seemed to have adopted a more common-sensical position that two different words *could* express one concept. But, oddly enough, that seemingly common-sense truism that two words sometimes express one concept would probably go astray as a close reading of Dharmakīrti’s own text. Although the precise terminology of *ldog pa gcig/tha dad* may be new, the idea of one difference (*bheda*), or one meaning (*artha*), being expressed by one and only one word *is* certainly present in Dharmakīrti’s *Svavṛtti* to verse 40-42:

“So, though there is no difference in their intrinsic natures, still the individuality (*viśeṣa*), the difference (*bheda*), which is understood through its respective specification, i.e., a name, cannot be made understood through another. Thus, all the words do not have the same meaning (*artha*). And, therefore, it is not so that the reason is a part of the thesis-proposition (*pratijñārthaikadeśa*).”⁶⁸

Indeed, Dharmakīrti’s proposed solution to the problem of substitutivity in opaque contexts would not work *at all* if the two expressions like “being impermanent” and “being produced” had the same meaning. It’s disturbing but true: the extreme position in dGe lugs pa Tshad ma textbooks got Dharmakīrti essentially right about a principle of “one word, one meaning.”

⁶⁸ See *Pramāṇavārttikasvavṛtti* ed. Gnoli 25, lines 24-26: *tasmāt svabhāvābhede 'pi yena yena dharminā* nāmnā yo viśeṣo bhedaḥ pratīyate na sa śakyo 'nyena pratyāyayitum iti naikārthāḥ sarvaśabdāḥ / tan na pratijñārthaikadeśo hetur iti /*. *Gnoli: *dharmeṇa*. We follow Kaṇṇakagomin’s reading *dharminā*, which he glosses (ed. R. Sāṅkṛtyāyana 120) as *asya vivaraṇam* “its specification.”

But where would this talk of conceptual identity and difference leave us philosophically? It might well seem to lead to far too many strange entities, a new separate entity for each word. The Sa skya pas were indeed loath to tolerate any such mysteriously subsistent entities and considered the Phya pa position concerning concepts as an aberration. For the Sa skya pas, concepts, universals, and the like were not objects (*yul = viṣaya*) at all. The only objects for them, were impermanent, causally efficacious, entities, the particulars (*rang mtshan = svalakṣaṇa*) of Dharmakīrti—the rest, be they perceptual illusions or concepts, were just cases of mistaken cognition (*'khrul shes*).⁶⁹ Thus, Sa skya Paṇḍita (in the first chapter of his *Tshad ma rigs gter*) emphasized that concepts were only *façons de parler* for different states of mind.⁷⁰ States of mind are fully existent and could be individuated so that a thought (i.e., the mental state or episode) that *A* is *F* would not be the same as a thought that *A* is *G*, even if the predicate terms *F* and *G* were synonymous. Precisely how those thoughts would be individuated does, however, remain to be seen. Indeed, whether Sa paṇ's approach would offer a satisfactory way out of Dharmakīrti's conundrum with referential opacity, or whether ultra-intensions will come in again via the back door to explain how thoughts do in fact differ, has to remain open here.

⁶⁹ See Kapstein 2000, 89-97 and Stoltz 2006 for Sa paṇ's arguments in the first chapter of *Tshad ma rigs gter*.

⁷⁰ See *Rigs gter rang 'grel*, chapter I (ed. Chab spel Tshe brtan phun tshogs, Vol. 2, 66-67): *'khrul shes gnyis la yul med cing // rang rig gis ni myong ba'i phyir // shes pa nyid yin de yang ni // med pa 'dzin phyir 'khrul shes yin // yul du byas na gnod pa can gyi tshad ma yod pas skra shad dang don spyi snang ba ni shes pa 'khrul pa nyid yin te ... /*. "The two sorts of mistaken cognition [i.e., mistaken perceptions and all conceptual thoughts] have no objects. Because the [illusions] are experienced through [the mind's] reflexive cognition [of its own states], they are simply consciousness. And because the [consciousness] apprehends something nonexistent it is a mistaken cognition. There are sources of knowledge that would refute [you] if you accepted [illusions] as objects, and therefore the [hallucinated] hairs and the concepts (*don spyi*) that appear are just mistaken cognition." The term *don spyi* is regularly used in Tibetan texts ever since Phya pa to mean "concepts," although in India it has a rather different and much more limited use. See Tillemans 1999, 234, n. 15, on the weird evolution of this term.

9. A theme for further investigation: Meinong in Tibet?

In the final analysis, the debate on the logico-semantic problem of substitutivity in opaque contexts seems to turn on one's commitment to ontology and metaphysics, and notably one's adherence to the strongly nominalistic orientation of Dharmakīrti. The dGe lugs pa-Phya pa traditions, as their adversaries rightly depicted them, did indeed claim that the entities in question, the *ldog pa* or "concepts," weren't actually real entities (*dingos po = bhāva, vastu*) at all, but just objects created by thought and language, or in other words, customarily existent things (*kun rdzob bden pa = samvṛtisatya*). Indeed, for them, objects (*yul = viśaya*) could be really existent particulars or merely customarily existent universals, permanent things and concepts. And the later dGe lugs pa would even flirt with completely nonexistent things (like rabbits' horns) being a type of quasi-object, although not an object (*yul*) properly speaking.⁷¹

The upshot of tolerating everything as an object is a position that might win favor with someone like the nineteenth century Austrian philosopher Alexius Meinong (1852-1920), who accepted objects that existed really as well as those that were nonexistent but merely subsisted. Ontologists naturally balk at such a seemingly baroque account of what there is, as they attach importance to parsimony, thus avoiding unnecessary entities, as well as to the abjuration of double talk—i.e., talk "which would repudiate an ontology while simultaneously enjoying its benefits" (Quine 1960, 242). I think the Sa skya pas, like Dharmakīrti, accepted that principle of parsimony, distrusting dGe lugs-Phya lugs profligacy and

⁷¹ In the opening paragraphs of *sDe bdun la 'jug pa'i sgo don gnyer yid kyi mun sel*, sometimes attributed to Tsong kha pa, we find the typical dGe lugs-Phya lugs position that being an object and being a knowable thing (*shes bya*) are coextensive (*don gcig*) and that objects are of two sorts: permanent and impermanent. In the *bsdus grwa* literature, dGe lugs pa regularly speak of nonexistent things (like horns on rabbits' heads) as being "objects of a type of grasping by a conceptual cognition that apprehends them" (*rang 'dzin rtog pa'i 'dzin stangs kyi yul*). See, e.g., *Yongs 'dzin blo rigs* (ed. Kelsang and Onoda) f.4b, line 5: *de chos can [= ri bong rwa chos can] rang 'dzin rtog pa'i 'dzin stangs kyi yul yin par thal / bdag med yin pa'i phyir /*. "Take that [i.e., the rabbit's horn] as the subject; it follows [correctly] that it is an object of a type of grasping by a conceptual cognition that apprehends it, because it is something lacking any [real] identity." The reason here, i.e., being something lacking a real identity, is a shorthand for any and every thing, be it existent or nonexistent—*yod med gang rung yin pa*.

their seeming double talk about things that didn't fully exist but were objects, nonetheless.⁷² The Sa skyas, in short, reasoned in a predictable fashion, as the ontologists they were, and followed the nominalism of Dharmakīrti, allowing as objects only those things to which they were unvocally committed in a pared down ontology.

On the other hand, for better or for worse, the dGe lugs pa and Phya lugs were not unlike Meinong in that they maintained that every mental state had an object, but not necessarily a fully real one—mental states are intentional and directed to things that may or may not be real, be they particulars, concepts, or even completely nonexistent things like barren women's children. The question then arises whether the dGe lugs pa-Phya pa followers, or Meinong for that matter, were guilty of multiplying entities unnecessarily, as their critics suggest. As Dreyfus 1997 shows, it is clear that the dGe lugs pa were far less nominalistically inclined than their Sa skyas counterparts: they allowed real universals as well as commonsense objects extended both in space and in time, thus radically reinterpreting the Dharmakīrtian insistence on momentary extensionless particulars; as we shall see in the next chapter, they had no compunctions about taking pervasion (and hence quantification) as ranging over all really existent, customarily existent, or completely nonexistent things.

Here is my own take on this debate: the dGe lugs pa were simply not much bothered by ontological scruples in their talk of objects but were up to something else. They remained closer to description instead of radical revision. Now, undeniably, we do think of things that are unreal and predicate properties of them, and so it is relatively easy to think that a *phenomenological* description of ordinary thought and language should simply allow for such objects and not try to explain them away. Meinong sought that type of phenomenological account and so did the dGe lugs pa. Of course, an ontologist would retort that an account in which unreal things are objects is *only* phenomenology and that a metaphysically acceptable account would have to analyze them otherwise. But it looks like the dGe lugs pa followers were not bitten by that bug. They saw little of the imperative to paraphrase or analyze the surface level

⁷² See also Kapstein 2000, 95-97, which develops the analogies with the Western debate between Bertrand Russell and Meinong, seeing the Sa skyas as having a similar negative purpose as Russell in banishing subsistent objects from their ontologies.

phenomenological description away in favor of some radically revisionist, deeper, metaphysical position. The lesson that they seem to promote is that lightweight (non-metaphysical) talk of objects is harmless; nonexistent objects are harmless, have little to do with ontology, and hence need no Quinean or Sa skya pa overkill.