

Closing a Gap in the Interpretation of Dharmakīrti's Logic

by

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*Dedicated to Hans Lenk in gratitude.*¹

It is the ontic character² of Dharmakīrti's logic that allows us to consider his method for ascertaining the necessary concomitance (*vyāpti*) of the concept of an "effect" as logical reason (*kāryahetu*) with that of a "cause" as its consequent (*sādhya*) to be a method for ascertaining a causal relation (*kāryakāraṇabhāva*) as well.

Scholars have long examined the formulation of this method from various perspectives, seeing it as two different topics, one causal, the other logical. I will begin by taking a closer look at the first, the causal. In my opinion, it was separated from the second due to its focus on causality, and moreover, its proper understanding was also impeded by a weighty interpretational mistake. Although the second topic, the logical one, fared better, its systematic purpose in the context of Dharmakīrti's work has not been clarified sufficiently.

Three papers presented in Vienna at the Second International Dharmakīrti Conference in 1989 are my starting point: one by Brendan Gillon, who criticized Dharmakīrti's proposed method for ascertaining a causal relation or, in other words, for solving the induction problem (Gillon 1991), and the papers by Tadashi Tani (1991) and myself (Steinkellner

¹ The reason for this dedication to the German philosopher Hans Lenk is my assumption that certain basic Buddhist epistemic and ontologic conceptions, such as *vikalpa*, *vāsanā*, *anāditva*, can fruitfully be stimulated by his epistemological thought: Grasping as acting on various levels of interventional interpretations on the basis of schemata that are bio-genetically determined on all levels. For some concise introductions to Lenk's thought, cf. Lenk 1998 and 2003; the collection of articles *Global TechnoScience and Responsibility: Schemes Applied to Human Values, Technology, Creativity, and Globalisation*, 2007; and chapters III and IV in Lenk and Paul 2014: 71–117.

² While, as a strict nominalist, Dharmakīrti is not bothered by a correspondence principle for the relationship between concepts or words and their referents in reality, his theory of concepts and their generation (*apohavāda*) provides, nevertheless, a link to reality via actual experiences. Actual experience gives some additional precision to the general profile of the concepts which are inherited from a past without beginning and continuously transported as residual impregnations in the continuum of cognition. Experience gradually reduces the innate erroneous misrepresentation of what there is in these impregnations. As for the concepts themselves, Dharmakīrti thinks that they can be more or less closely related to reality. In order to cope with a world of universal dissatisfaction, what is needed is a way to distinguish concepts that are closer to reality from those that are less or not at all related to reality. The former can be considered sound or true because they can be relied on in activities. To determine their truth is the task of logic, a method for deriving the truth of one concept from its necessary concomitance with another concept whose truth is already established or generally accepted. With Dharmakīrti, in this respect going beyond Dignāga's logical conceptions, the result of distinguishing sound or true concepts from others is possible because their relationship is grounded in relations that are considered real, such as factual identity and causality. It is this idea that makes for nothing less than an ontic character of Dharmakīrti's logic. Yet, even if Dharmakīrti admits at the same time that factual identity and causality, too, are only conceptual constructs, he considers them as the only reliable constructs that satisfyingly function when applied in worldly affairs and with the ambition to transgress the world of suffering.

1991), which dealt with Dharmakīrti's proposal of how to ascertain concomitance (*vyāpti*) in the case of a *svabhāvahetu*.

Tadashi Tani, on his part, was able to show that in Dharmakīrti's first work (that is, the first chapter of the *Pramāṇavārttika* with the *Vṛtti* usually called **Svavṛtti*),³ a *prasaṅga* assumes this function.⁴ In my own paper, I examined the meaning of Dharmakīrti's later formulation of this device, in the *Vādanyāya*, as *viparyaye bādhakapramāṇa*. Dharmakīrti developed this method on the basis of the *sattvānumāna*, and by means of an experiment I was able to show that it is applicable to all *svabhāvahetu* inferences, such as the one of the designation "tree" from the designation "Śiṃśapā." The question left open at the time I wrote my paper was "... whether the different treatments of the *svabhāvahetu* and the *kāryahetu* in this respect were not also resolved in a certain sense in order to design a homogeneous logical system, or at least, whether there are no indications to be found in Dharmakīrti's work that he was aiming in this direction" (Steinkellner 1991: 323).

Based on PV 1.23'cd and passages from the *Hetubindu*, Tani in fact already answered this question affirmatively, summarizing: "The *kāryahetu* too can be interpreted by the same model ..." and "The necessary relation can be determined by SVB-pramāṇa." Yet, he added: "Nevertheless, Dharmakīrti did not explicitly explain so" (Tani 1991: 337).

In fact, Tani only very closely missed the mark. The passage he refers to (PV 1.23'cd–24ab with PVSV 17,5–7) belongs to a section of the *Vṛtti* in which Dharmakīrti establishes the essential relation (*svabhāvapratibandha*) as the fundament of a reason's non-deviation from the property to be proved (PVSV 10,13–20,13). It is, however, only in the section beginning with PV 1.34ab (from PVSV 21,24 to the end of the work) that Dharmakīrti actually deals with the question of how, in the case of the two types of acceptable reasons, such an essential relation can be ascertained. And it is here, in PV 1.34 with PVSV 22,2–4 and 6f, that Dharmakīrti's answer is clearly spelled out in regard to the *kāryahetu*. It is this clarification that links my present paper to both Tani's explanation and Gillon's critique.

I will start with Gillon, because only with a more exact view of the object of his critique are we in a position to see that Dharmakīrti did, in fact, already in this first work of his, provide everything needed for designing a comprehensive and consistent logical system, even if he did not use the later and subsequently traditional term *viparyaye bādhakapramāṇa*.

In his 1991 paper, Gillon demonstrated that "Dharmakīrti's solution" to the problem in his formulating a method for ascertaining a causal relation "can be seen not to work" (Gillon 1991: 57). As far as I can see, Gillon's critique seems invalid with regard to Dharmakīrti's statement as it has been interpreted until now by all who have set their minds to it, including myself.⁵

³ For the historical position of this work, cf. Frauwallner 1954: 144–148 and 152, where Frauwallner tentatively names it **Hetuprakaraṇa*; for its character, cf. Steinkellner 2013: I xxviiif.

⁴ Tani 1991: 332–338. Tani refers to *prasaṅga* as "hypothetical negative reasoning."

⁵ Gillon's observations were later refined in two papers by Horst Lasic, who closely analysed the cognitive process implied in the steps of this method (1999) and interpreted it as serving another aim, namely, that of justifying a *vyāpti* already ascertained (2003: 194). But the existence of an induction problem remained unquestioned; this was finally also affirmed by John Dunne (2004: 191–192) and Tom Tillemans (2004: note 25; cf. below).

I must admit that I could not approve when, in 1989, I heard Dharmakīrti being charged with such a blunder, or with not having seen the pitfalls implied in his proposed method. This irritation lingered on: While on one hand, Dharmakīrti's fallacy seemed evident, on the other hand, it did not coincide with my appreciation of the acuteness of his thinking and expression. Yet it was only after my retirement that I had the leisure to look at the issue again in the hope of being able to disperse my qualms. When a seemingly correct translation nonetheless doesn't make sense, the first step I have always taken is to examine the original again. So that is what I did. The fault may lie, after all, not in the interpreted object but in the interpreter's perception. The results of my re-examination have already been published (Steinkellner 2013), and are reflected in three sentences of translation and 25 pages of notes. Alas, all in German!⁶

I will, therefore, first remind you of Gillon's critique, which, on the basis of Kajiyama's translation, is directed against Dharmakīrti's earliest formulation. Then I will indicate the crux of all earlier translations and summarize the main points of my new understanding.⁷ Finally, I will draw support for this interpretation from Dharmakīrti's last work, the *Vādanyāya*.

The formulation at stake consists of three sentences that belong together. So far, everyone has only dealt with the first sentence (except for John Dunne, who includes the second but misunderstands it, and Gillon and Richard Hayes, who include the third but jump over the second). These sentences are:

1. *yeṣām upalambhe tallakṣaṇam anupalabdham yad upalabhyate, tatrai-kābhāve 'pi nopalabhyate, tat tasya kāryam.*
2. *tac ca dhūme 'sti.*
3. *sakṛd api tathādarśanāt kāryaḥ siddhaḥ, akāryatve 'kāraṇāt sakṛd apy abhāvāt* (PVSV 22,2–4 and 6f).⁸

The salient point of Gillon's critique⁹ has been made quite clear by Tom Tillemans:

⁶ The conclusion of these notes (II.209f) also finds support from Śāntarakṣita's *Tattvasaṅgraha* 1695–1697, where the causality relation and non-existence are similarly seen: in both cases only the respective verbal usage (*vyavahāra*) is inferred, not a real entity as such (cf. Steinkellner 2019: 68–69).

⁷ In this section, I repeat parts of a paper delivered at the Lumbini conference in 2013 (cf. Steinkellner 2015).

⁸ Kajiyama translates the first: "If a thing (E) which, having perceptible characteristics, was not perceived, is perceived when *other things* (Cs) have been perceived, and if, when even one thing (C) *among these* has disappeared E is not perceived, then E is the effect of C ..." (Kajiyama 1963: 2f; E = effect, C = cause). Other samples of translations are: "If a previously unperceived thing defined as perceptible is later perceived when *other things* are perceived, and if that thing is not perceived when one *among those other things* is absent, then it is the effect of *that thing*. That kind of definition of an effect applies to smoke" (Dunne 2004: 335). "That which, not having been apprehended, is apprehended, when *its conditions* have been apprehended, [but] is not apprehended, when even *one of them* is absent, is [ascertained] to be *their* effect. ... An effect is established because of being observed even once in that way, because, if it were not *an effect*, it would not arise even once from what is not its cause" (Gillon and Hayes 2008: 353 and 398).

⁹ In his paper, Gillon only concludes: "... Dharmakīrti seems to believe that a sequence of five simple non-relational observations results in relational knowledge. ... The problem is that this sequence cannot discriminate between genuine causes and spurious correlations. ... Moreover, further observations will

The root of the problem of determining causality is that people just have no way of knowing definitely when they have correctly isolated the true cause from the myriad of other background things. Using Mill's method or that of Dharmakīrti, there can always be the doubt that, in spite of something being thought to be the cause, the presence of *that* circumstance was not in fact what was actually responsible for the effect and *its* absence was not what brought about an absence of the effect – some other hidden factor that we didn't know about, didn't think about and perhaps didn't see at all was first present and then absent at the key stages of our tests (Tillemans 2004: note 25).

The following is my present translation. The italicized words indicate deviations from my earlier ones.

1. That (entity) (*tat*) which (*yat*) as unperceived (at first), although (on principle) perceptible, is perceived on the perception of *which* (*other entities present*) (*yeṣām*), (and again) is not perceived when even a single (entity) *among these* (*other entities*) (*tatra*) is absent, is the effect of *this* (*single other entity that is absent*).
2. And *this* [*fact of being conditionally*¹⁰ *known through perceptions and non-perceptions*] does occur in the case of smoke.
3. From being observed in this way even once (something, such as smoke,) is established as *that which is to be effected* (*kāryaḥ*) (by something else, such as fire); for, were it not (*that which is*) *to be effected* (by this), it would not even once occur on account of that which is not (its) cause.

In terms of mere translating, this new version is roughly the same, with the exception of some added phrases, as all those earlier ones that evoked Gillon's critique. My interpretation of the italicized items, however, differs in the following ways:

1. Hitherto almost everyone¹¹ has assumed the pronoun *yeṣām* to refer to the many different individual entities as causes that, by coming together, constitute a single causal complex (*hetusāmagrī*). I now consider the plural pronoun, in the light of Dharmakīrti's concept of "cause," which always means a causal complex, to refer to different causal complexes and not different individual causes that together constitute a single causal complex.¹²

never eliminate the possibility of spurious correlation. But this is just the induction problem again" (Gillon 1991: 58).

¹⁰ "Conditionally," in this context, is short for "in respect to the fact of the presence or absence of something else."

¹¹ The exception being Horst Lasic who already in 1999: 237 and 238 clearly excluded an interpretation of *yeṣām* as referring to the constituents of a single causal complex when he paraphrases with "a perception of everything present at the place of observation." In my note (2013: 354) I overlooked this paraphrase. Mind, however, that in my opinion Lasic's "things" should also be understood as causal complexes.

¹² For Dharmakīrti's concept of cause as a causal complex, cf. various passages in HB § b.1221 with Steinkellner 1967: 44–55 (see also Shah 1967: 45–59), Steinkellner 1971: 184–188, and Dunne 2004: 161–169. Cf. also the collection of excerpts from the *Vādanyāyaṅikā* and the references to Arcaṭa's *Hetubinduṅikā* in the appendix of Steinkellner 2015.

2. The process of cognition described in the first sentence consists of several perceptions and non-perceptions under certain conditions, namely, the presence and absence of another entity, and it refers to a specific case of two different entities. In order to generalize the cognition derived from a specific case, Dharmakīrti uses a *reductio ad absurdum* argument, a *prasaṅga*, when he says, in the third sentence: “Were (something, say smoke,) not to be effected (by another thing, say fire,) it (could) not even once occur on account of that which is not (its) cause.”¹³ This second step indicates an unwanted consequence, should the truth of the cognition gained by observing a specific concrete case not be accepted. It thereby is supposed to provide the qualities of necessity and general validity for this cognition. In other words, the *prasaṅga* “transforms,” so to speak, the formulation into one of a necessary concomitance (*vyāpti*),¹⁴ and in this function of justifying a specific common presence and absence as being necessary in general, the *prasaṅga* is an integral part of the proposed method.
3. Thus, the three cited sentences belong together. Together they make for a veritable proof formula (*prayoga*): The first sentence states a specific cognition of the common presence and common absence (*anvayavyatireka*) of the property “being conditionally perceived and non-perceived” as the logical reason (*hetu*) with the property to be established, the consequent (*sādhyā*), namely, “being the effect of a certain other entity.” This cognition of a mere *anvaya* and *vyatireka* is transformed into, i.e. established as, a generally valid *vyāpti* by the third sentence, the *prasaṅga*. And the second sentence states the presence of the reason (“being conditionally perceived and non-perceived”) in the locus of smoke (*pakṣadharmatā*).

In this way, I think, Dharmakīrti tried to overcome the problem of an incomplete induction. I consider his completing the concomitance formulation with a *prasaṅga*, whose function is to justify that formulation, to be a veritable stroke of genius. Whether he really succeeded or only shifted the problem to yet another level is a question beyond the scope of this article.

Dharmakīrti actually modified this early formulation¹⁵ in his later works, the *Hetubindu* and the *Vādanyāya*.¹⁶ In these, the *prasaṅga* argument is either not included, as in the *Hetubindu*’s first passage (HB § 3.32), which is focussed on the formal aspects of inference and proof, or it is present in a more elaborate form, as in the *Hetubindu*’s second passage (HB § 4.22) and in the *Vādanyāya*.¹⁷

¹³ PVSV 22,6f: *akāryatve ’kāraṇāt sakṛd apy abhāvāt*.

¹⁴ Dharmakīrti expressly states this to be the function of the *prasaṅga* in PVin 3. 4,7–9 (cf. Watanabe, this volume: § 2.3).

¹⁵ It was repeated with only syntactic adaptations in the *Pramāṇaviniścaya* (PVin 2. 85,6–8).

¹⁶ For the differences of these formulations from the earlier ones, cf. Steinkellner 2013: II 193–198; for a synoptic survey of the formulations, see Steinkellner 2013: II 197.

¹⁷ Throughout the later tradition, it was particularly the formulation offered in the first passage of the *Hetubindu* that was adopted as the authoritative Dharmakīrtian statement on the issue. In my study of 2013, much to my shame, I completely forgot the *prasaṅga*-related passages in his later works and judged this wrongly asserted lack of a *prasaṅga* argument as a set-back in Dharmakīrti’s theory (Steinkellner 2013: II 204). I now see that Dharmakīrti did not (!) change his conception of ascertaining a causal relation, but rather further elaborated on the original version in his later works with the purpose of strengthening exactly this *prasaṅga*.

We can thus jump straight to the *Vādanyāya*, his last work, where Dharmakīrti's awareness of the induction problem is most clearly revealed. Already in the *Vṛtti* (PVSV 22,10–23,6 with PV 1.35), Dharmakīrti deals with the issue that an effect, say, smoke, does not deviate from fire as its cause (*avyabhicāra*) by parrying the idea that it may have “another cause,”¹⁸ such as a termite hill.¹⁹ In his answer there, Dharmakīrti repudiates the opponent's proposal by clarifying that this deviating item is only something similar to smoke, but not one of “such type” (*tādṛśa*) that it is the product of something that is “such,” namely, being able to produce real smoke.²⁰

In the *Vādanyāya*, however, where Dharmakīrti demonstrates how “effect” as a means of proof (*sādhanaṅga*) is justified (*samarth-*), the notion of “another cause” is given a more stringent meaning. The relevant passage in the *Vādanyāya* (VN 4,2–10) consists of two parts: One is Dharmakīrti's last formulation (VN 4,2f) of the content to be ascertained, a causal relation; the other is his answer to an alternative, in a sentence nicely resembling Tilleman's conclusion cited above: “Another (entity) may be capable in regard to (the production of) this (effect); because of the absence of that (other entity) this (effect) did not come about” (*anyat tatra samartham. tadabhāvāt tan na bhūtam*, VN 4,6f).

The formulation in the *Vādanyāya* is as follows: “This (entity) comes to be, when *that* (*other entity*) is present, (and) even if the (various) causes of this (entity) which are different from *that* entity (and) capable (of producing its perception) are present, (this entity) does not come about in the absence of *that* (*entity*).”²¹ Here, the problem seen by Gillon in the earlier formulation is still present.

¹⁸ PVSV 22,10: *anyahetukatvān nāhetukatvam iti cet*.

¹⁹ Cf. PVT₁ 60a7 = PVSVT₁ 100,12. When summarizing his argument, Dharmakīrti refers to the termite hill (*śakramūrdhan*) again: “If a termite hill is of fiery nature, it is surely fire. If it is not of fiery nature, how can smoke come about there?” (*agnisvabhāvaḥ śakrasya mūrdhā yady agnir eva saḥ / athānagnisvabhāvo 'sau dhūmas tatra katham bhavet // PV 1.36*). To understand this example of the termite hill, I can offer a quite plausible physical explanation that I gratefully received from the entomologist Dominique Zimmermann of the Natural History Museum Vienna: Temperature and humidity in termite structures are kept constant by means of ventilation systems (which maintain the temperature at around 30 degree Celsius). The air that escapes through the central chimney can be up to 15 degrees warmer and also more humid than the surrounding air. Given the appropriate conditions, the escaping air, through effects of condensation, can become visible as vapour. Zimmermann could not find any references to this phenomenon in scientific publications. She sees this as possibly due to the fact that biologically it is irrelevant whether the air escaping from a termite hill is visible as vapour or not. But since a termite hill is used as an example by our philosopher, we can safely assume that this sort of smoke-like vapour from termite hills was commonly known in India.

²⁰ PVSV 22,14f: *tādṛśād dhi bhavan sa tādṛśaḥ syāt*. And *tādṛśa* is “something with a certain nature when it comes about through nothing but its own cause,” as he states later in the *Hetubindu* (*yo hi yasya svabhāvaḥ, sa svahetor evotpadyamānas tādṛśo bhavati*, HB 11,7f).

²¹ *idam asmin sati bhavati, satsv api tadanyeṣu samartheṣu taddhetuṣu tadabhāve na bhavati* (VN 4,2f). In this formulation, a form was chosen the proximity of which to the Venerable's description of a causal relation in the short formula at the beginning of the *pratīyasamutpāda* is obvious and seemingly intended. For the *ādi*-formula of the *pratīyasamutpāda*: *asmin satīdam bhavati, asyotpādād idam utpadyate* (“If that is present, this comes to be; on account of the arising of that this arises”), cf. La Vallée Poussin 1913: 49–51.

But then, Dharmakīrti considers the option of “another cause,” not of something similar to smoke, but of smoke as such.²² And in order to indicate the unwanted consequence should the above justification not be acknowledged, he adds:

Otherwise, (i.e.) if only (the proposition) “(this) is not present in the absence of that” (*tadabhāve na bhavati*) were communicated, the (causal) capacity of the latter would be in doubt, since also another (entity) is absent there (where the latter is absent). Another (entity, then) may be capable in regard to (the production of) this (effect); because of the absence of that (other entity,) this (effect) did not come about. (In this case) moreover, the absence (of the effect) in the absence of that (cause) would be (nothing but) a fortuitous conformity (*yādṛcchāsaṃvāda*), just like the absence of a date palm that grows in regions where mother marriage is customary in the absence of mother marriage in other regions.²³

By introducing a *prasaṅga* into his proof of a causal relation and by this final elaboration of the *prasaṅga*'s function, Dharmakīrti seems to have solved, for his own specific purposes²⁴ and historical context, the problem of induction found in the need to know, with indisputable certainty, the common absence of reason and consequence as a necessary feature of a good reason.

Now, induction in a modern, post-Baconian sense is a method for acquiring knowledge. This was certainly true for Dharmakīrti as well. There is, however, possibly a limitation to this comparison due to the fact that Dharmakīrti deals with it only in connection with the need in Dignāga's system of logic to ascertain the knowledge of the common absence of two properties (*vyatireka*). This problem was already realized by Dharmakīrti's teacher Īśvarasena, who felt motivated to increase the number of characteristics of a good logical reason to six, instead of the three as defined by Dignāga.²⁵ It is for this reason that I believe the “taste” of the induction problem in the Indian context to be different. The important remaining questions are not only whether indeed different concepts of induction and its problem are at stake, but also whether Dharmakīrti actually succeeded in working out a solution to the induction problem as such, and if not, where exactly he failed under the new interpretation presented. Yet, with much curiosity I will have to leave it to better equipped and interested philosophers to find answers to questions such as these.²⁶

We can now shift to the same statement as a logical topic:

The three sentences we dealt with so far from the perspective of being a method for ascertaining causality must also be seen, in terms of the central purport of Dharmakīrti's

²² VN 4,6f: *anyat tatra samartham, tadabhāvāt tan na bhūtam.*

²³ VN 4,5–10: *anyathā kevalaṃ tadabhāve na bhavātīty upadarśane 'nyasyāpi tatrābhāve sandigdham asya sāmāthyam. anyat tatra samartham, tadabhāvāt tan na bhūtam. etannivṛttau punar nivṛttir yadṛcchāsaṃvādaḥ, māṭṛvivāhocitadeśajanmanah piṇḍakharjūrasya deśāntareṣu māṭṛvivāhābhāve 'bhāvavat.*

²⁴ Such as to avoid the insufficiencies of Īśvarasena's *adarśanamātra*-theorem (cf. Steinkellner 1966 and 2013: note 180) or his increasing Dignāga's three characteristics of a good reason to six (cf. HB § d., Steinkellner 1967: 70–78 with notes, and Steinkellner forthcoming).

²⁵ On Īśvarasena's *ṣaḍlakṣaṇo hetuḥ*, cf. HB 40,1–47,7 and Steinkellner 1967: 70–78; 1979: note 475; as well as Tillemans 2000: note 335.

²⁶ See the appendix.

work, from the logical perspective. As said above, the three sentences amount to a proof that consists of a *vyāpti* formulation, the indication of a *pakṣadharmatā* and a *prasaṅga* to establish the *vyāpti*, because the section of PV 1.34–38 (PVSV 21,24–24,7) is dedicated to the question of how the essential relation that a *kāryahetu* presupposes can be ascertained.²⁷

The question is then whether we can identify, also in this case, the *prasaṅga* component applied for establishing the *vyāpti* of a *kāryahetu*, as in the case of the *svabhāvahetu* (Steinkellner 1991: 319ff.), as structurally constituting or being equivalent to a *sādhyaviparyaye bādhakapramāṇa*. I think we can. Again, however, only by way of an experiment because – as Tani has said – he “did not explicitly explain so.”

According to Dharmakīrti's later work, the *bādhakapramāṇa* is the non-perception of a pervading property (*vyāpakadharmānupalabdhi*, VN 8,6) through which the absence of the reason in the contradictory opposite (*viparyaya*) of the consequent (*sādhya*) can be inferred.

In this experiment, the principal uncertainty lies in determining the pervading property (*vyāpaka*). If Dharmakīrti had a pre-formation of the later term for this structure in mind, as I think he did, this property should not be one that is referred to in the proof itself, but one that should nevertheless be referred to in his *prasaṅga*. As far as I can see, the only candidate to offer itself is the property of “being observed in this way at least once” (**sakṛttathādṛṣṭatva*).²⁸ Under this hypothesis, we may conclude that the property **sakṛttathādṛṣṭatva*, which pervades the reason “being conditionally perceived and non-perceived,”²⁹ is not perceived and thus is negated in the locus of the contradictory opposite of the property to be proven, i.e., the property of “not being the effect of that” (**atatkāryatva*).

Moreover, I think we can discover this structure in the words Dharmakīrti uses to complete the *prasaṅga* establishing the *vyāpti*, namely: “For, were it not (that which is) to be effected (by this), it would not even once occur on account of that which is not (its) cause,”³⁰ when he continues with the words “If an effect, however, would occur without its cause, it would not have a cause at all,”³¹ and to this adds, with the pepper of irony, a proof formula in corroboration of this last statement: “That, namely, is not a cause of this, which occurs without that; and smoke occurs without fire; therefore this (smoke) would not have that (fire) as (its) cause.”³²

To conclude: If my experiment can be considered sound, it means that Dharmakīrti applied the structure of the later (*sādhya*)*viparyaye bādhakapramāṇa* already in his first work, and at the appropriate place in his work, that is, where the ascertainment of a logical concomitance as based on essential relations is the subject matter. Already in his first work, then, Dharmakīrti seems to have given a comprehensive and consistent account of all the basic constituents of his new logic, even if he did not yet use the terminology he coined later.

²⁷ This section is followed by PV 1.39 (PVSV 7–15), where the same question is answered for the *svabhāvahetu*.

²⁸ I derive this hypothetically constructed property from *sakṛd api tathādaryanāt* (PVSV 22,6).

²⁹ A property derived from *bhāvābhāvasādhanapramāṇābhyām* (VN 4,1f).

³⁰ *akāryatve 'karaṇāt sakṛd apy abhāvāt* (PVSV 22,6f).

³¹ *kāryasya ca svakāraṇam antareṇa bhāve 'hetumattaiva syāt* (PVSV 22,7f).

³² *na hi yasya yam antareṇa bhāvah, sa tasya hetur bhavati; bhavati ca dhūmo 'gnim antareṇa; tan na taddhetuḥ syāt* (PVSV 22,8–10).

At this point we also have to pay attention to the wider context of Dharmakīrti's logical thought and to follow up on some more questions that need answers. For I think there is yet another way to get to grips with Dharmakīrti's "failure" to solve the induction problem beyond being possibly satisfied with the solution presented above. And this line of interpretation will have to be elaborated, too, although I do not think it will make for a substantial difference in respect to the induction issue. Here I can only indicate the general direction of the way.

Right at the beginning, when he introduces the new theorem of the three kinds of logical reason (*trividhā hetu*) for the first time, Dharmakīrti cites a statement that is possibly from Dignāga's lost *Hetumukha* (cf. Frauwallner 1959: 103f.):

All this dealing with inference and what can be inferred is entirely based on a distinction between properties and a bearer of properties, (a distinction) that is mounted on the mind (*buddhyārūḍha*).

(*sarva evāyam anumānānumeyavyavahāro buddhyārūḍhena dharmadharmibhedena*, PVSV 2,22–3,1).

These words express, above all, the trivial acknowledgement that a logician is dealing with concepts and linguistic items, also when cause and effect and their relation are at stake. This means that Dharmakīrti is clear about the fact that inference, as resulting knowledge, belongs to the realm of concepts which are inherited from a beginningless past. As such, it is also erroneous because it does not truly represent reality as it is (*yathābhūta*). But the application of logical rules and his specific theory of concept formation (*apohavāda*) allow for a differentiation between concepts that can be considered true, i.e., referring to real (*sat*) entities, and false, i.e., referring to unreal (*asat*) entities. Exactly this differentiation, then, is the task of inference when it attributes or excludes properties from entities, and its success is the reason for judging inferential cognition as valid (*pramāṇa*), meaning reliable when adopted in any kind of activity, be it worldly or aiming beyond.

Moreover, by purging false concepts, inference is essential for weeding out all those misapprehensions that are the cause for being bound to continuous suffering existence (*saṃsāra*), the cause of which is for Dharmakīrti, above all, the belief in a permanent self (*ātman*), tantamount to nescience (*avidyā*).³³

Terms such as "cause," "effect," and their "relation" refer to concepts and as such have no referent in reality. This is clearly spelled out in Dharmakīrti's *Sambandhaparīkṣā*, a short work that I believe was composed in close proximity to his first work on logic. If it is necessary, as I said at the beginning, to identify causes and what effects they have in order to act successfully as a worldling or as someone already on the Buddhist path, one must clarify what a cause and what an effect are. In other words: On what grounds can we attribute the word or concept of "cause" or "effect" to a certain entity? Or: Why can we correctly say that something is the "effect" of something else as its "cause"?

The answer to such questions is Dharmakīrti's *yeṣām upalambhe*-formula presented above. It offers no less than a logical model that determines exactly in what sense the concepts or terms of "cause" and "effect" can be correctly applied, for it provides a reason

³³ Cf. Vetter 1990: 22–26, 42f., 112–114; Eltschinger and Ratié 2013: 4–36.

on account of which something can be conceived and named as being the effect of a specific cause.

Not being a post-Baconian scholar, causality as a natural phenomenon may not have been Dharmakīrti's concern. Yet what he laboured over was also not a mere "language game." On the contrary, his examination had the most serious purpose of uprooting the false conceptions that constitute impediments for the mind in its progress towards liberation from suffering.³⁴ In the same manner as his elaborations on the inference from essence as reason (*svabhāvahetu*), which is based on the common acceptance of linguistic conventions (*tathāprasiddhi*, PVSV 16,30f), Dharmakīrti's thought on causality and on the inference from effect as reason is grounded in the very core of the Buddhist world view.³⁵

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³⁴ On this purpose in earlier layers of Buddhism, cf. Hamilton 2000 and Ronkin 2005: 193ff.

³⁵ Cf. Dunne 2004: 193–222; Kellner 2004; Steinkellner 2013: II 204–210.

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Appendix

Having seen my paper of 2015, Claus Oetke sent me a mail (November 26, 2016) on the subject of induction with its different aspects that I consider valuable sharing in the hope to make the present contribution more interesting to philosophers. Claus Oetke says (in my translation from the German):

There are (at least) four variants of problems related to induction that are reflected by the following questions:

1. How is it possible, a) to distinguish between causal and merely accompanying states of affairs and b) to find out which (preceding) states of affairs are causes of (later) appearing facts and which are not?
2. How is it possible to justify that for a certain (type of) fact only a certain other (type of) fact can be the cause?
3. How is it possible to ascertain that a regularity given within certain framing conditions must also be given within alternative framing conditions?
4. How is it possible to ascertain that in the world of experience there are causal regularities (at all) and that laws referring to causality must be valid?

... Regarding Dharmakīrti, he apparently offers a plausible answer to 1), while it looks as if he was aware of questions 2) and 3) yet did not offer a cogent solution. Against this the problematic question of 4) seems to be altogether beyond his sense of problems, while it is, seen philosophically, the perhaps most significant question.