Jain Conceptions of Non-Cognition: A Dialogue with Dharmakīrti on Inferential Evidence

by

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1. Introduction

1.1. Philosophical background

This paper aims at presenting and comparing the way non-cognition can serve as the basis of inference according to Buddhist and Jain philosophers, as well as to indicate the philosophical relevance of the main divergences between the two conceptions. I will focus on the view of the Buddhist Dharmakīrti, as it is found in his *Pramāṇavārttikasvavṛtti* and *Nyāyabindu*, as well as on the view of the Jains Akalaṅka in his *Laghīyastraya* and Māṇikyanandi in his *Parīkṣāmukham.*

First of all, the teachings of Akalaṅka (720–780) represent an important step in the development of Jain philosophy, especially in the constitution of a paradigm clearly distinct from the Buddhist one. More precisely, Akalaṅka has founded a systematic Jain theory of knowledge in answer to Dharmakīrti's attacks against the Jain theory of non-one-sidedness. Following the style of his Buddhist opponent, Akalaṅka expresses his theses in a very concise way. For example, in his *Laghīyastraya* (henceforth LT), the *Three Short* [*Treatises*], instead of presenting all the types of inference he grants, he presents only the discrepancies between the ones Dharmakīrti accepts and the one he himself accepts. This concise style explains our recourse to his commentators. Firstly, the Jain Māṇikyanandi (9th c.) has organized Akalaṅka's mature philosophy in the *Parīkṣāmukham* (PM), the *Introduction to Philosophical Investigation*. What is more, this work has itself been commented on by the Jain Prabhācandra (980–1065) in his *Prameyakamalamārtaṇḍa* (PKM), the *Sun that Grows the Lotus of Knowable*, as well as by Vādi Devasūri (12th c.) in his *Pramāṇanayata-ttvālokālaṃkāra* (PNT), the *Commentary on the Explanation of the Nature of Knowledge and Viewpoints*. These three works constitute a lineage of commentaries and share the same conception of inference. I will refer to them as "the tradition of Akalaṅka." Since PM is the first work in this tradition, I will mainly refer to this text, and will quote from PKM and PNT respectively only when considering matters which are absent from earlier works.

Dharmakīrti's texts are implicitly referred to in the sections on inference in LT and in PM, and explicitly in PKM and PNT. There, the most frequently quoted work of Dharmakīrti is the *Pramāṇavārttikasvavṛtti* (PVsV), the *Auto-commentary on the Essay on Knowledge*. In this paper, following Prabhācandra and Vādi Devasūri, I will mainly refer to the PVsV. But I will also make use of Dharmakīrti's *Nyāyabindu* (NB), the *Drop of Logic*, because one finds there the most extensive list of correct types of inference he grants.

To begin with, it is useful to sketch the aforementioned framework of theories of inference, so as to agree on concepts as well as on the means to express them. First of all, inference is the cognitive process by which an epistemic agent acquires new knowledge

using reasoning. It is specifically used in situations in which cognitive processes like perception fail. Entities being dealt with in metaphysical inquiries are typical examples of such situations. Inferential reasoning consists more precisely of the transmission of certainty from the established knowledge of the fact that a property, referred to as "the evidence-property" (*hetu*), is ascribed to a given object, to the new knowledge of the fact that another property, referred to as "the target-property" (*sādhya*), is ascribed to the same object.[1] For example, from the previous knowledge that there is smoke on the hill, a person can know that there is fire on the hill.[2] As Shah (1967: 248) noticed, the Sanskrit expression for inference, *anumāna*, refers to this transmission, since it means "the knowledge that follows [another knowledge]." And this transmission of certainty is based on the *vyāpti* between the target-property and the evidence-property. *Vyāpti* means "pervasion" and is traditionally translated by the technical expression "invariable concomitance" in order to refer to the situation in which whenever the evidence-property is present, the target-property is present too. Because such a situation is usually granted by the fact that the target-property is *pervading* the evidence-property, as we find, for example, between the property of being a tree and the property of being a Sissoo tree.

What is more, stating such an inferential reasoning is the core mechanism of philosophical debates, in which the aim is to convince the interlocutor that a given piece of knowledge, even if not directly agreed on, is a valid one. In consequence, since every participant in such a debate is to seek convincing inclusions, the determination of the extension of the domains of predicates is one of the core issues in those debates.

1.2. Types of inferential evidence in Buddhism and in Jainism

In this conceptual framework, philosophers were aiming towards a theory of the proper relationship between the target-property and the evidence-property. That is to say that they considered it insufficient that the target-property is always present when the evidence-property is present, and they wanted to be able to distinguish between arbitrary and necessary universal relationships. An important step towards such an achievement was Dignāga's introduction of the particle *eva*, which functions similarly to the operator of focus "only."[3] One of Dharmakīrti's subsequent breakthroughs in this dynamic was to seek the precise reasons why a target-property is always present when its evidence-property is present, and as a consequence to accept as good evidence only the properties that are 'essentially' connected to the target-property. The requirement that inferential reasoning relies only on

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[1]   In the following, I will abbreviate sentences as "the property of 'being endowed with fire' is ascribed to the subject 'here'" by saying simply "there is fire here."

[2]   In my presentation of inferential reasoning, I make explicit the epistemic conditions by writing "the knowledge that there is smoke on the hill," and not "there is smoke on the hill." But I defend the position that although these epistemic conditions are present, it is important to keep them implicit in a *formal* representation. I do so because in contemporary logic, expressing these epistemic conditions within the object language is usually a technique used in order to have a level of description in which it is possible to deal only with the pure relation between propositions. But this is important to keep in mind that logic in India is concerned with the relation between an epistemic subject and a proposition.

[3]   Dignāga introduced this particle in his attempt to combine the theory of the triple characteristic of the evidence-property (*trairūpya*) with the theory of the necessity of the absence of the target-property when the evidence-property is absent (*avinābhāva*).

necessary relationships led Dharmakīrti to consider only two types of essential connections as ensuring correct inferences: the connection between an effect and it cause, and the connection between two natural properties. In doing so, Dharmakīrti provides "the ontic foundation for valid reasoning" (Katsura 1992: 224). More concretely, only three types of inferential evidence are granted: (i) natural properties (*svabhāva*); (ii) effects (*kārya*); and (iii) non-cognitions (*anupalabdhi*). Indeed, with such a conception, it is not accidental that whenever there is a Sissoo tree, there is also a tree. This is due to the very nature of the Sissoo, for which being a tree is a natural property. And this is also not accidental that whenever there is smoke, there is also fire. This is due to the very nature of smoke, which is the effect of fire. What is more, cases of non-cognition are consequences of this state of affairs also, since it is not accidental that whenever there is no tree, there is also no Sissoo and that whenever there is no fire, there is no smoke.

Two remarks are important for what follows. First of all, we should keep in mind the difference between the first two types of evidence, which are used to infer a presence; and the last one, which is used to infer an absence. The second remark is that when Dharmakīrti speaks about "natural property" he first intends the relation between, e.g., the property of being a cow and the property of being an animal. In other words, he intends a relation between two predicates that do not have the same extension. If we consider that these predicates denote natural kinds, then "pervaded properties" are species, and "pervasive properties" are genera.[4] What is more, only pervaded properties are good evidence to infer the presence of their respective pervasive properties, and not the other way around, since knowing that there is a Sissoo is sufficient to know that there is a tree, but knowing that there is a tree is not sufficient to know that there is a Sissoo, for there might be an oak. Contrary to this, only pervasive properties are good evidence to infer the absence of their respective pervaded properties, and not the other way around, since knowing that there is not a tree is sufficient to know that there is no Sissoo, but knowing that there is no Sissoo is not sufficient to know that there is no tree, for there might be an oak. What is more, when Dharmakīrti speaks about "natural property" he also intends to speak about the relation between, e.g., the property of being perishable (*anityatva*) and the property of being a product (*kṛtakatva*). In this case, we have a relation in which the two predicates are co-extensive. Here, no restriction needs to be done in order to draw correct inferences. Both conceptions are in the same category "natural property," because in both cases it concerns the description of the nature of a thing, and because in both cases there is a numerical identity between what is characterized by the pervaded property and what is characterised by the pervasive property.

Jain philosophers of Akalaṅka's lineage have a different conception of evidence. More precisely, they consider that there are especially six situations in which the presence of an invariable concomitance is unquestionable, namely when the evidence-property is (i) a property pervaded (*vyāpya*) by the target-property; (ii) an effect (*kārya*) of it; (iii) a cause (*kāraṇa*) of it; (iv) a predecessor (*pūrvacara*) of it; (v) a successor (*uttaracara*) of it; or (vi) a co-existent (*sahacara*) with it. My paper deals with the causes and consequences

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4   We are used to conceiving the species 'cow' as the set of all cows. But in Vaiśeṣika, the universal 'cowness' is a *characteristic* possessed by all cows. This is how genus and species should be considered here also.

of one discrepancy between Akalaṅka's tradition and that of Dharmakīrti,[5] namely the fact that "non-cognition" is not part of this list. In fact, instead of being considered as good inferential evidence, as it is by Dharmakīrti, "non-cognition" is considered by Jain philosophers as part of the general form an inference might have.

1.3. Non-cognition as a cognitive or as a linguistic process

In order to understand why "non-cognition" is not listed by Jain philosophers as good evidence, but as part of the general form an inference might have, let us consider the motivations of its introduction for both Dharmakīrti and Akalaṅka. First, when introducing non-cognition as a type of evidence, Dharmakīrti's program is quite specific: he intends to prove the possibility of knowing absences from inference. Such a possibility is essential for Buddhist soteriology, which relies on the awareness of the absence of a persistent soul. This, in turn, enables him not to commit himself to the existence of a third kind of means of knowledge in addition to perception and inference, since everything – absences included – can be known from one of these two means.[6] Therefore, he is only interested in non-cognition as good evidence to infer an absence. Contrary to this, Jain philosophers additionally investigate the situations in which it is possible, from non-cognition, to infer a presence. Such considerations on the possibility to infer presences from absences are not new. They can already be found in the Vaiśeṣikasūtra 3.1.9 and, approximately at the same period, in Jain canonical literature in the Ṭhāṇaṃgasutta (Sthānāṅgasūtra, Possibilities) 4.3.336. Besides, Dharmakīrti criticizes these conceptions in his PVsV in the chapter on inference for oneself, svārthānumānapariccheda 20ff. If we compare Akalaṅka, Māṇikyanandi, Prabhācandra and Vādi Devasūri, we can see an evolution of their focus.

First, Akalaṅka in his LT is clearly responding to Dharmakīrti. He does refer to non-cognition also as a means to know absences and diverges from his Buddhist opponent mainly on the following:

> LT.15. People [think they] know the non-existence of the mind of others because of its invisibility. [But this is incorrect,] because the modifications of the forms of this [mind] would be impossible otherwise [than with the postulation of the existence of their minds].[7]

The relevance of this quote is intelligible only if we recall that Dharmakīrti claimed that it is only the non-cognition of something that is usually perceptible and that meets the conditions for cognition that can be used as the basis of an inference.[8] In LT 15, Akalaṅka is criticizing this on the ground that it is wrong to think that non-cognition can be used to infer the absence only of perceptible entities, since it can be used to infer the absence of imperceptible entities as well. For example, from the absence of the recognised characteristics of human cognitive abilities at the moment of death, it is possible to infer the absence of the mind

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[5]   For a more thorough survey of Jain theories of inference in Akalaṅka's tradition, see Gorisse 2017.
[6]   For more on this topic, see Katsura 1992: 228.
[7]   *adṛśya-paracitta-āder abhāvaṃ laukikā viduḥ / tad-ākārā-vikāra-āder anyathā anupapattitaḥ //* Edited by Shastri (1939: 6). Also translated in German by Balcerowicz (2005: 175).
[8]   For more on this topic, see Kellner 2003.

that causes them (see Shah 1967: 276). We won't go further in this discussion, as it is sufficient for our purpose to understand that for both authors, the concern is primarily an epistemological one.

Contrary to this, non-cognition is by the time of Māṇikyanandin primarily conceived as a negative premise in the stated form of an inference. We have mentioned the fact that inference is not only a cognitive process by which one can acquire knowledge, it is also the rational means used in debates in order to be assured that from a true input, the output is always true as well. In this context of convincing, the inferential process has to be stated, and when this is done so it is commonly followed by a regulated argumentation aiming to defend or refute it. The stated form of an inference is what Indian philosophers call "inference for others" (*parārthānumāna*), in opposition to "inference for oneself" (*svārthānumāna*). And whereas Dharmakīrti has introduced non-cognition already in the section presenting the inference for oneself, Māṇikyanandi and after him Prabhācandra and Vādi Devasūri introduce non-cognition only in the section presenting the inference for others, that is to say, in the section that deals with inference firstly as a linguistic device to transfer values with certainty. And this switch from an epistemological to a formal concern becomes fully explicit with Vādi Devasūri, who introduces cognition and non-cognition in terms of basis for, respectively, affirmation and negation:

> PNT.3.55. Cognition and non-cognition are the basis for the establishment of affirmation and negation.[9]

This focus on the linguistic form of inference is what explains why in this precise section of the treatises of Māṇikyanandi, Prabhācandra and Vādi Devasūri, nothing is said concerning epistemological problems related to the knowledge of absences. In other words, the Jain focus is on non-cognition as a negation, that is to say as a linguistic device usable to reverse the truth value of a sentence. This work on the relationship between negative (respectively affirmative) premises and negative (respectively affirmative) conclusions led them to single out four forms an inference might have, namely:

(i) Cognition of [evidence] compatible [with the target-property] in the case of affirmation [of the thesis] (*aviruddha-upalabdhir vidhau*);

(ii) Cognition of [evidence] incompatible [with the target-property] in the case of negation [of the thesis] (*viruddha-upalabdhiḥ pratiṣedhe*);

(iii) Non-cognition of [evidence] compatible [with the target-property] in the case of negation [of the thesis] (*aviruddha-anupalabdhiḥ pratiṣedhe*);

(iv) Non-cognition of [evidence] incompatible [with the target-property] in the case of affirmation [of the thesis] (*viruddha-anupalabdhir vidhau*).

Since the goal of this paper is to compare what can be inferred from non-cognition within this classification of forms of inference with what can be inferred from non-cognition in Dharmakīrti's classification of types of evidence, it is important to have his classification in mind before we explain the Jain one.

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[9]   *upalabdhir vidhi-niṣedhayoḥ siddhi-nibandhanam anupalabdhiś ca* / Bhattacharya (1967: 226).

1.4. Types of non-cognition in Dharmakīrti

First of all, according to Dharmakīrti, there are several means to infer that a property does not pertain to a given object. On one hand, this can be achieved from the previous knowledge that another property does not pertain to this object as well. For example, if there is no tree in a given place, then there is also no Sissoo in this place. This first type of non-cognition is "non-cognition" (*anupalabdhi*) properly speaking. Here, knowledge of absence is gained by means of absence of knowledge. On the other hand, to infer that a property does not pertain to a given object can also be achieved from the previous knowledge that a property incompatible with the one that one seeks to know does pertain to the object under discussion. For example, it is sufficient to know that there is a fire in the room, in order to know that the room is not cold. This is so because there cannot be heat and cold at the same place at the same time. For this second type of non-cognition, even though the process does involve a cognition (of the fire) properly speaking, Dharmakīrti speaks also about "non-cognition," because the cognition of the presence of a property incompatible with another one is equivalent to the knowledge of the impossibility for at least one of the conditions of existence of this other property to be the case. And this, in turn, amounts to the non-cognition of this precise condition.

Now, next to this distinction between non-cognition properly speaking and cognition of a property incompatible with the one that one seeks to know, Dharmakīrti also grants that it is possible to know absence of different types of thing. For example, one may know the absence of something, the absence of its effect, or the absence of its cause. From these distinctions, eleven types of non-cognition are recognised in NB.[10] For the sake of the coming comparison, I will not follow the order of Dharmakīrti's presentation in NB, but I will present the eleven types of non-cognition following the Jain thematic classification:

> **Cognition of an [evidence] incompatible [with the target-property]**
> **Type 1** (*viruddha-x-upalabdhi*)
> (ix) Cognition of a [property] pervaded by a [property] incompatible [with the target-property] (*viruddha-vyāpta-upalabdhi*)
> (x) Cognition of the effect of [something] incompatible [with the target-property] (*viruddha-kārya-upalabdhi*)
> **Cognition of an [evidence] incompatible [with the target-property]**
> **Type 2** (*x-viruddha-upalabdhi*)
> (v) Cognition of a [property] incompatible with [the target-property] itself (*svabhāva-viruddha-upalabdhi*)
> (vi) Cognition of a [property] incompatible with a [property] pervading [the target-property] (*vyāpaka-viruddha-upalabdhi*)
> (vii) Cognition of a [property] incompatible with the effect [of the target-property] (*kārya-viruddha-upalabdhi*)
> (viii) Cognition of a [property] incompatible with the cause [of the target-property] (*kāraṇa-viruddha-upalabdhi*)

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10   Again, I have chosen the presentation of types of non-cognition as it is in NB, because it is the most comprehensive list, so it furnishes more material to work with in the line of a comparison. But other presentations are found in the different texts of Dharmakīrti. Especially, three types of evidence involving non-cognition are granted in HB; and four types in PVsV.

Non-cognition [**of an evidence for the target-property**] (*anupalabdhi*)
(i) Non-cognition of [the target-property] itself (*svabhāva-anupalabdhi*)
(ii) Non-cognition of a [property] pervading [the target-property] (*vyāpaka-anupalabdhi*)
(iii) Non-cognition of the effect [of the target-property] (*kārya-anupalabdhi*)
(iv) Non-cognition of the cause [of the target-property] (*kāraṇa-anupalabdhi*)
Complex cognition of an [**evidence**] **incompatible** [**with the target-property**]
(xi) Cognition of the effect of a [property] incompatible with the cause [of the target-property] (*kāraṇa-viruddha-kārya-upalabdhi*)

We will examine these types of negative evidence one by one in the course of the presentation of the classification offered by Māṇikyanandi.

2. The four forms of inference according to Māṇikyanandi

In what follows, I will focus on Māṇikyanandi, because Akalaṅka does not offer such an extensive list of the forms of inference and of the different types of evidence valid in each form. In addition, the conceptions of Prabhācandra and Vādi Devasūri on this topics are substantively the same as those of Māṇikyanandi.

2.1. Cognition of [evidence] compatible [with the target-property] in the case of affirmation [of the thesis] (*aviruddha-upalabdhir vidhau*)

The first pattern is the plain affirmative one. This is the form I have been using by default until now. It is used to express inferences of the presence of a property due to knowledge of appropriate evidence for it. As we have seen, Jain philosophers grant six types of evidence as being appropriate in this context. In Māṇikyanandi's words:

> PM.3.59. In the case of affirmation [of the thesis], there are six kinds of cognition of [evidence] compatible [with the target-property], namely [the evidence can be a property] pervaded (*vyāpya*) [by it], an effect [of it], a cause [of it], a predecessor [of it], a successor [of it] or [a property] co-existent [with it].[11]

Māṇikyanandi gives the example "sound is subject to change, because it is a product."[12] In the Indian paradigm of philosophy, this is an example with co-extensive predicates. But it is important to recall that with predicates of different extensions, only the one which is pervaded constitutes correct evidence in this first form. To compare with Dharmakīrti's theory, this is in this plain affirmative form that he acknowledges evidence-properties that are natural properties (*svabhāva*) or effects of the target-property. In PVsV.1.1.6, as in NB.16–17, the examples are, respectively, "this is a tree, because this is a Sissoo" and "there

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[11]   *aviruddha-upalabdhir vidhau ṣoḍhā vyāpya-kārya-kāraṇa-pūrva-uttara-sahacara-bhedāt* / Ghoshal (1940: 122).
[12]   *pariṇāmī śabdaḥ kṛtakatvāt* / Ghoshal (1940: 127).

is fire there, because there is smoke."[13] In conclusion, cognition of evidence compatible with the target-property in the case of affirmation of the thesis is twofold in Dharmakīrti's theory and sixfold in the Jain one.

I will not discuss predecessor, successor or co-existent in this paper,[14] which focuses on the divergences between the two frameworks only when non-cognition is involved, because Dharmakīrti never accepts predecessor, successor or co-existent as correct evidence, no matter whether a non-cognition is involved or not or whether the conclusion of the inference is being stated in a positive or in a negative form. Contrary to this, there are interesting divergences to reflect upon when cause is being considered, because the efficiency of causal evidence is not the same for affirmative and negative forms. Therefore, we will have a special focus on it. First of all, in the affirmative form, Dharmakīrti and Māṇikyanandi agree on the fact that the presence of something can be inferred from the knowledge of the presence of its effect, as in "there is intelligence in this living being, because [it shows activities] like speech."[15] And the divergence appears when the Jain tradition considers as well that the presence of something can be inferred from the knowledge of the presence of its cause, like in "there is shade here, because there is an umbrella."[16] In consequence, the causal relationship is a symmetric one as far as the Jain conception is concerned, whereas for Dharmakīrti, only the effect, and not the cause, can serve as evidence in a correct inference. The fact that, e.g., the presence of a seed is not sufficient evidence for the future presence of a plant, is due to the fact that it is impossible to be sure that no impediment is blocking the potency of the given cause to produce its effect.[17] If combinatory considerations alone are being developed, the same divergence, namely the fact that the Jain tradition under consideration accepts both cause and effect, and that Dharmakīrti accepts only the effect, as correct evidence, should be seen in the second form of inference as well. Let us have a look at this second form to see if this is what happens.

2.2. Cognition of [evidence] incompatible [with the target-property] in the case of negation [of the thesis] (*viruddha-upalabdhiḥ pratiṣedhe*)

The second form is used to express inference of the absence of a property from knowledge of evidence incompatible with it.

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[13]   ta ete kārya-svabhāva-anupalabdhi-lakṣaṇās trayo hetavaḥ / yathā 'gnir atra dhūmāt / vṛkṣo 'yaṃ śiṃśapātvāt / Gnoli (1960: 2); *svabhāvaḥ* […] *yathā vṛkṣo 'yaṃ śiṃśapātvād iti / kāryaṃ yathā vahnir atra dhūmād iti* / Desai (1991: 52).

[14]   This has been done in Gorisse 2015.

[15]   *asty atra dehini buddhir vyāhāra-ādeḥ* / Translated by Ghoshal (1940: 128).

[16]   *asty atra chāyā chatrāt* / Ibid.

[17]   This discussion exceeds the aim of this paper. Let me just indicate that Māṇikyanandi, as well as Naiyāyika philosophers, will counter-attack Dharmakīrti by offering a more finely grained definition of a 'cause' as being what already consists of the totality of conditions needed for the emergence of the effect. In other words, as what already ensures that the pre-requisite that nothing is blocking its potency is fulfilled. Since this conception implies that the effect is already present when the cause is being investigated, both conceptions actually agree.

2.2.1. What is an incompatible (*viruddha*) evidence?

In all Dharmakīrti's examples, something is incompatible with the target-property if it is its precise contrary. For example, "constant" (*dhruva*) is incompatible with "inconstant" (*adhruva*), or "cold" (*śīta-sparśa*) with "fire/heat" (*agni*). As far as pervasion and causality are concerned, Māṇikyanandi also uses contraries to illustrate incompatibility. But when it comes to succession, a property recognised as being incompatible with the target-property is not necessarily its contrary. For example, the present rising of the star Revatī is recognised as being incompatible with the rising of the star Rohiṇī in a *muhūrta*,[18] because Revatī is the group of stars in the constellation of Pisces which is the last group of stars to rise in the sky. And in this way, it is impossible for Rohiṇī to rise after it:

> PM.3.75. Rohiṇī won't rise in a *muhūrta*, because Revatī has just risen.[19]

As a consequence, at least for Māṇikyanandi and his commentators, what is incompatible with the target-property is "anything whose presence prevents the presence of the target-property." This being understood, the types of incompatible evidence which ensure inferential knowledge are exactly the same types of evidence as in the previous form. In Māṇikyanandi's words:

> PM.3.71. In the case of negation [of the thesis], the types of cognition of evidence incompatible [with the target-property] are the same [as the types of cognition of evidence compatible with the target-property in the case of affirmation of the thesis].[20]

To state it in an explicit way, a property pervaded by something incompatible with the target-property, an effect, a cause, a predecessor or a successor of something incompatible with the target-property, as well as a property co-existent with something incompatible with the target-property, all these are correct evidence of the absence of the target-property. In PM.3.72, the example "there is no feeling of cold here, because there is warmth"[21] is found. In this example, warmth is a species of heat, which is incompatible with cold.

This form of inference with negative conclusions is a means to know absences. As such, it should interest Dharmakīrti. And indeed, he recognizes as correct evidence two types which belong to this form, namely the cognition of a property pervaded by something incompatible with the target-property and the cognition of an effect of something incompatible with the target-property.[22] The example presented in NB.2.36 is not the same as that found in PM.3.72: the disappearance of a being – even of one that has come into

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[18] A *muhūrta* is a unit of measurement in classical Indian astrology, representing approximately 48 minutes.

[19] *na-udeṣyati muhūrta-ante śakaṭaṃ revaty-udayāt* / Ghoshal (1940: 130). Śakaṭaṃ (the Chariot) is another name for Rohiṇī (the Rising one). Its Arabic name is Aldebaran (the Follower), because its rise follows the one of the famous Pleiades. Concerning Revatī, it means "the Prosperous."

[20] *viruddha-tad-upalabdhiḥ pratiṣedhe tathā* / Ghoshal (1940: 129).

[21] *na asty atra śīta-sparśa auṣṇyāt* / Ghoshal (1940: 129).

[22] See paragraph 1.4 of this paper.

being – is not inevitable, because it requires a further cause.[23] In this example, "requiring a further cause" is pervaded by "being evitable;" and the properties of "being evitable" and of "being inevitable" are incompatible ones. As for the cognition of an effect of something incompatible with the target-property, the example in NB.2.35 is the same as that found in PM.3.73, namely "there is no feeling of cold, because there is smoke here."[24] Here, "being endowed with smoke" is an effect of "being endowed with fire/heat;" and the properties of "being endowed with heat" and of "being endowed with cold" are incompatible ones.

To sum up, Māṇikyanandi accepts the same six types of evidence for the first and for the second form of an inference. In the same way, my presentation of Dharmakīrti's theory indicates that he accepts pervaded (*vyāpta*)[25] properties and effects of a given target-property as sufficient evidence to infer its absence, as he did in the affirmative form. This means that here again, the Buddhist and the Jain tradition disagree on the status of the cause, since Māṇikyanandi recognizes the cause as correct evidence, as in PM.3.74 "there is no happiness in this creature, because it has grief,"[26] whereas for Dharmakīrti, only the effect, and not the cause, can serve as incompatible evidence to infer an absence:

> PV.1.5. The cognition of the causal conditions of what is incompatible with that [property which is to be established] is erratic when used when there is no incompatibility between the causal conditions [of the property to be disestablished and the property that is incompatible with it].

> PVsV.1.5.1. For example, [a bad inference based on this kind of erratic sign is]: because there is firewood here, there is no feeling of cold.[27]

In other words, it is not sufficient to know the presence of the cause of what is incompatible with a given target-property in order infer the absence of the latter, because something might block the potency of the cause. On the contrary, knowing the presence of what is incompatible with the cause of a given target-property is sufficient in order to infer the absence of the latter, since it cannot be present without its cause.[28] First, Māṇikyanandi is avoiding this problem, since in PM.3.74 he provides with an example of the cause of what is incompatible with a given target-property, which turns out to be also what is incompatible with the cause of this target-property. Second, the discrepancies between the cause of what is incompatible with a given target-property and what is incompatible with the cause of this target-property calls for another type of non-cognition evidence, as we will see in the next paragraph.

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[23]   *viruddha-vyāpta-upalabdhir yathā na dhruva-bhāvī bhūtasya api bhāvasya vināśo hetv-antara-apekṣaṇād iti* / Desai (1991: 71).

[24]   *viruddha-kārya-upalabdhir yathā na atra śīta-sparśo dhūmād iti* / Desai (1991: 70).

[25]   The difference between natural property (*svabhāva*) and pervaded (*vyāpta*) will be considered in the section on non-cognition.

[26]   *na asmin śarīriṇi sukham asti hṛdaya-śalyāt* / Ghoshal (1940: 130).

[27]   *tad-viruddha-nimittasya yā-upalabdhiḥ prayujyate / nimittayor viruddhtva-abhāve sā vyabhicāriṇī // yathā na śīta-sparśo 'tra kāṣṭhād iti* / Edition in Gnoli 1960: 6; English translation by Gillon and Hayes (1991 : 10).

[28]   In the next paragraph, examples of these types of inference will be considered and schemata will be provided.

By the way, these complex inferential forms are not needed in this framework, since they can be dealt with thanks to transitivity. Indeed, when we know how to get new knowledge from previous knowledge of the effect, and that we know how to get new knowledge from previous knowledge of a property incompatible with the target-property, then we know how to get new knowledge from previous knowledge of what is incompatible with the effect of this target-property. And Māṇikyanandi explicitly accepts transitivity when he writes:

> PM.3.90. The pieces of evidence which arise one after the other should be included here (in this list).[29]

2.2.2. Dharmakīrti's extra type of incompatibility

If we go through the eleven types of non-cognition listed by Dharmakīrti in his NB, then we notice that he deals with a second type of incompatibility, in which what is at stake is not the effect, etc. of what is incompatible with the target-property, but rather what is incompatible with the effect, etc. of it. Strangely enough, Jain philosophers do not even mention this second type of incompatibility. In this type of form of inference, not two, but four sub-types depending on the type of evidence are granted by Dharmakīrti, namely what is incompatible with the target-property itself, what is incompatible with a pervader of it, what is incompatible with an effect of it and what is incompatible with a cause of it. Let us only consider the third situation of this list, namely what is incompatible with an effect of the target-property. This situation is interesting, because in NB.2.37, Dharmakīrti uses the example "there are no causes of cold whose potency is unimpeded here, because there is fire,"[30] and this example is easily comparable to the one "there is no feeling of cold, because there is smoke here" he used in NB.2.35 for the effect of what is incompatible with the target-property. More precisely, let us draw a schemata representing the cause and effect of heat in the first line, and the cause and effect of cold in the second line. The elements in bold in this schemata are the ones being considered in NB.2.35:

> Causes of fire → **heat/fire** → **smoke**
>
> Causes of cold → **cold** → goose flesh

Whereas NB.2.37 is concerned with the following elements:

> Causes of fire → **heat/fire** → smoke
>
> **Causes of cold** → **cold** → goose flesh

By the way, it is interesting to notice that in the second example, there is the restriction "whose potency is unimpeded." This means that in a normal case, the presence of a fire in a room is a sufficient sign for the absence of cold in this room. Another example using this restriction, is found in NB.2.32 on the occasion of a situation displaying non-cognition as evidence, namely: "there is no fire (lit., 'causes of smoke') whose potency has not been

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29   *paraṃ-parayā saṃbhavat sādhanam atra eva antarbhāvanīyam* / Ghoshal (1940: 135).
30   *na iha apratibaddha sāmarthyāni śīta-kāraṇāni santi vahner iti* / Desai (1991: 74).

obstructed, because there is no smoke."[31] This example illustrates the fact that in a normal case, that is to say in a case in which no external parameter is blocking the spreading of the smoke, its absence is a sufficient sign for the absence of the fire.

As we explained, Dharmakīrti accepts four sub-types of such incompatible evidence. The extra two are due, first to the fact that he distinguishes between natural property (*svabhāva*) and pervaded property (*vyāpta*); and second, to the fact that he here accepts not only the effect, but also the cause, as correct evidence. These two differences are important ones. Since they are also present in the non-cognition type of evidence; and since Jain philosophers do not develop the second type of incompatibility, but develop the non-cognition one, we will investigate their importance when considering non-cognition.

2.3. Non-cognition of [evidence] compatible [with the target-property] in the case of negation [of the thesis] (*aviruddha-anupalabdhiḥ pratiṣedhe*)

The third form advocated by Māṇikyanandi is the one used to express inferences of the absence of a property from the non-cognition of appropriate pieces of evidence. This is non-cognition properly speaking. According to Māṇikyanandi, there are six types of evidence that ensure inferential knowledge in this form:

> PM.3.78. In the case of negation [of the thesis], there are seven kinds of non-cognition of [evidence] compatible [with the target-property], namely [the evidence can be the target-property] itself, a [property] pervading (*vyāpaka*) [it], an effect [of it], a cause [of it], a predecessor [of it], a successor [of it] or a [property] co-existent [with is].[32]

Two main differences with the precedent forms are to be noticed. First, only a property pervading the target-property can function as correct evidence, whereas only a pervaded property could in the previous forms. The reason for this has been fully developed in 1.2.

The second difference from the previous forms is that "the target-property itself" is added to the list of correct evidence. Indeed, in reasonings aiming at inferring an absence from a non-cognition, knowledge is gained through the inference from "I do not know the presence of the target-property" to "I know that the target-property is absent." But in the affirmative, nothing would have been gained through the inference from "I know the target-property" to "I know the target-property." As for incompatibility, the situation is more complex and we need to come back to Dharmakīrti in order to understand what happens. In Dharmakīrti's presentation, whereas he is speaking of natural property (*svabhāva*) in general for the first type of evidence, he distinguishes between *svabhāva* and *vyāpaka* in the situations involving non-cognition and cognition of incompatible properties. I have therefore translated *svabhāva-viruddha-upalabdhi* by "cognition of [a property] incompatible with [the target-property] itself," and *vyāpaka-viruddha-upalabdhi* by "cognition of [a property] incompatible with [a property] pervading [the target-property]." Now, we have seen that the two inferential forms involving incompatibility which are granted by Dharmakīrti are,

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[31]   *na iha pratibaddha-sāmarthyāni dhūma-kāraṇāni santi dhūma-abhāvād iti* / Desai (1991: 67).

[32]   *aviruddha-anupalabdhiḥ pratiṣedhe saptadhā svabhāva-vyāpaka-kārya-kāraṇa-pūrva-uttara-sahacara-anupalambha-bhedād iti* / In Ghoshal 1940: 131.

on one hand, cognition of a [property] pervaded by, etc. a [property] incompatible [with the target-property] and, on the other hand, cognition of a [property] incompatible with a [property] pervading, etc. [the target-property]. And when it comes to "[with the target-property] itself," the difference between the two types of incompatibilities vanishes. This is probably the reason why Dharmakīrti, in NB.2.34 "there is no feeling of cold, because there is fire/heat,"[33] has treated this type of evidence only one time, as an incompatible of the own nature of the target-property (and not as the own nature of something incompatible with it). This, in turn, might be what explains that "incompatible with the target-property itself" is not being considered as correct evidence in the second form by Jain philosophers either, since they do not consider at all the second type of incompatibility presented by Dharmakīrti.

Now that we have seen the two differences between this third form and the two previous ones in the Jain framework, let us consider Dharmakīrti's conception on the matter. When it comes to the knowledge of absence of the target-property from the non-cognition of sufficient evidence for it, Dharmakīrti grants more types of properties that can function as sufficient inferential evidence than in the two previous forms. Indeed, non-cognition of the target-property itself, non-cognition of a property pervading it, non-cognition of an effect of it and non-cognition of a cause of it are all correct evidence to infer its absence. First, we have already said one word on the non-cognition of a property pervading the target-property (*vyāpaka-anupalabdhi*), for which NB.2.33 gives the same example as PM.3.80, namely "there is no Sissoo here, because there is no tree."[34] Second, we have also presented non-cognition of the target-property itself. In NB.2.31 the following example is found "[It is known that] there is no smoke here, because there is non-cognition of that which meets the conditions for cognition,"[35] which is equivalent to the example in PM.3.79 "there is no pot here, because it is not known."[36] Third, concerning causality, something unexpected happens. More precisely, we are used to reading Dharmakīrti's writings on the fact that an effect can be used as good evidence for the presence of its cause. We are less used to seeing him write that a cause may also be one. And yet, in NB.2.39 and PM.3.82, the inference of the absence of the target-property from the non-cognition of its cause (*kāraṇa-anupalabdhi*) is presented with the following correct example "there is no smoke, because there is no fire."[37] Second, the inference of the absence of the target-property from the non-cognition of its effect (*kārya-anupalabdhi*) is presented in NB.2.32 and PM.3.81 with the following correct example "there are no causes of smoke whose potentials are unimpeded here, because there is no smoke."[38] If we conceive negations as inverting the values, how then are we to give an account of the fact that Dharmakīrti accepts the non-

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[33]   *svabhāva-viruddha-upalabdhir yathā na atra śīta-sparśo vahner iti* / In Desai 1991: 70.
[34]   *na atra śiṃśapā vṛkṣa-abhāvāt iti* / In Desai 1991: 69. *na asty atra śiṃśapā vṛkṣa-anupalabdheḥ* / In Ghoshal 1940: 132.
[35]   *na atra dhūma upalabdhi-lakṣaṇa-prāptasya anupalabdhir iti* / In Desai 1991: 67.
[36]   *na asty atra bhūtale ghato 'nupalabdheḥ* / In Ghoshal 1940: 132.
[37]   *na atra vahny agny-abhāvāt iti* / In Desai 1991: 75. *na asty atra dhūmo 'n-agneḥ* / In Ghoshal 1940: 132.
[38]   *na iha apratibhaddha-sāmarthyāni dhūma-kāraṇāni santi dhūma-abhāvāt iti* / In Desai 1991: 67. *na asty atra apratibhaddha-sāmarthyo 'gnir dhūma-anupalabdheḥ* / In Ghoshal 1940: 132.

cognition of the effect of a target-property as good evidence for its absence? Indeed, if only combinatory purposes are intended, then:

A → B is equivalent to ¬ B → ¬ A[39]

Therefore:

K (cause x) → K x[40] is equivalent to ¬ K x → ¬ K (cause x)

Which, by definition of a cause and of an effect, is equivalent to:

¬ K (effect x) → ¬ K x

It seems therefore suspicious to accept that the non-cognition of the effect of a target-property entails the knowledge of its absence, without accepting that the knowledge of the presence of the cause of a target-property entails the knowledge of its presence, as we have seen in 2.1. But if we have a closer look at Dharmakīrti's refusal of the fact that cause constitutes correct evidence in the affirmative form, we see that the point of disagreement is elsewhere. Indeed, in his PVsV, Dharmakīrti accepts the following:

> PVsV.1.7.1. For in that case, it is only the possibility of the effect's arising from the complete cause that is inferred, because there is an inference of the aptitude of the collected [causes] to produce an effect. And the aptitude is dependent on nothing more than the totality [of causes], so it is only a *virtual natural property* (*svabhāva-bhūta*) that is inferred.[41]

In other words, Dharmakīrti accepts that one is legitimised to infer the *potentiality* of the effect from the presence of its cause. Because when we deal with future events, we deal with potential phenomena, not actual ones, since "*the beautifully coloured apple that showed promise of tasting sweet may turn out to have a bitter taste.*"[42] Therefore, Dharmakīrti rescued cause as good piece of evidence given appropriate restrictions. What he is saving in doing so is our ability to make predictions. Indeed, if cause could never be used as an evidence in order to infer its future effects, no prediction could be made by means of inference. And since inference and perception are the only two ways to acquire knowledge according to Buddhist philosophers, and since perception can be of no use in relation with future events, it would not have been possible for us to make predictions at all. And this, in turn, would have had bad consequences, especially for Buddhist soteriology. In conclusion, what Dharmakīrti does not accept is not that the causality relation is not symmetric, but that it is possible to speak about a future event as if it was an actual one. And since in the form exemplified by "there is no smoke, because there is no fire," no knowledge of a

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[39]   "¬ B → ¬ A" is to be read "non B entails non A."
[40]   "K cause x" is to be read "knowledge of the presence of the cause of x."
[41]   *tatra hi kevalaṃ samagrāt kāraṇāt kārya-utpatti-saṃbhavo 'numīyate samagrāṇāṃ kārya-utpādana-yogyatā-anumānāt / yogyatā ca sāmagrī-mātra-anubandhinī iti svabhāva-bhūta eva anumīyate /* Edition in Gnoli 1960: 6, translation by Gillon and Hayes (1991: 11).
[42]   Gillon and Hayes 1991: 69.

future event is concerned, there is no reason why it should not be accepted as a correct form of inference. In conclusion, also epistemological considerations and not only formal ones are here guiding Dharmakīrti's choices. By the way, a possible explanation for the fact that Jain philosophers do not mention the second form involving incompatibility is that they are more concerned with formal considerations and that this is a form which, as far as the transmission of truth values is concerned, is redundant with the one involving non-cognition.

2.4. Non-cognition of [evidence] incompatible [with the target-property] in the case of affirmation [of the thesis] (*viruddha-anupalabdhir vidhau*)

And finally, the last form advocated by Māṇikyanandi is the one used to infer the presence of a target-property from the non-cognition of evidence incompatible with it. In such a challenging form, inference can rely on only three types of evidence, namely the target-property itself, its cause and its effect. In Māṇikyanandi's words:

> PM.3.86. In the case of affirmation [of the thesis], there are three kinds of non-cognition of [evidence] incompatible [with the target-property], namely the non-cognition of [evidence] incompatible with [the target-property] itself, an effect [of it], or a cause [of it].[43]

This last form involves both non-cognition and incompatibility. It is considered that such a combination of two negations entails an affirmation. In this form, one cannot draw as many types of correct inferences as in the other forms, because there exist situations in which "non-non-A" does not equal "A." This is especially a problem for Jain philosophers, who considered the present rising of the star Revatī as being incompatible with the present rising of the star Rohiṇī. Let us take an intuitive example to see the problem: if Tuesday can be considered as non-Monday, then non-non-Monday may admittedly be Monday, but it might also be Wednesday, or any day of the week provided it is not Tuesday. Actually, the only way for "non-non-A" to be the equivalent of "A" is if "non-A" refers to the whole list of things that are non-A, and not only to one item of this list. To escape this problem, Māṇikyanandi deals only with predicates that divide the domain into two parts when he investigate this last form. More precisely, the example presented in PM.3.89 to illustrate the inference of the presence of a target-property from the absence of something incompatible with it is the following one "all things possess several aspects, because something having only one aspect is never found."[44] By the way, this example is an important one, because this inference is meant to establish the Jain doctrine of non-one-sidedness (*anekāntavāda*). Second, the example presented in PM.3.87 to illustrate the inference of the presence of a target-property from the absence of the effect of something incompatible with it is the following one "as for example, some disease exists in this animal, because the actions of a healthy body are not found."[45] And third, the example presented in PM.3.88 to illustrate the

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[43] *viruddha-anupalabdhiḥ   vidhau   tredhā   viruddha-kārya-kāraṇa-svabhāva-anupalabdhi-bhedāt* / Ghoshal (1940: 133).

[44] *anekānta-ātmakaṃ vastv-ekānta-svarūpa-anupalabdheḥ* / Ghoshal (1940: 134).

[45] *yathā asmin prāṇini vyādhi-viśeṣa asti nirāmaya-ceṣṭa-anupalabdheḥ* / Ibid.

inference of the presence of a target-property from the absence of the cause of something incompatible with it is the following one "there is pain in this individual, because he has no connection with his dear ones."[46] In these three examples, the incompatible properties are, respectively, unique/non-unique (*ekāntasvarūpa/anekāntasvarūpa*), healthy/non-healthy (*āmaya/nirāmaya*) and happiness/unhappiness (*sukham/duḥkham*). That is to say, couples of contraries whose contrary nature is reflected already in the grammatical formation of the words. In this way, there is no third option. Someone is either happy or unhappy. In consequence, in this framework not-unhappy is happy, and nothing else.

As for Dharmakīrti, we have seen that his aim in PVsV is to give an account on the means to know absences by means of inference. From this, it is only natural that this form leading to an affirmative conclusion did not receive his attention in this passage.

3. Conclusion

After having compared the way non-cognition is involved in the inferential process in the Buddhist and in the Jain traditions, I would like to summarize their main points of divergence, as well as to address the consequences of these divergences.

First, Dharmakīrti considers non-cognition as a type of evidence employable to infer the absence of a normally perceptible entity, and Akalaṅka extends this conception to non-perceptible entities as well. In distinction to this, Māṇikyanandi and his commentators consider non-cognition mainly as a negative premise in the stated form of an inference, without being specifically concerned with the possibility to know that something is absent thanks to inference. In this new dynamic, non-cognition is introduced only in the section on inference for others, whereas Dharmakīrti introduced it already in the section on inference for oneself. In other words, the concern on non-cognition in Jainism lies more in the fact that its linguistic counterpart is a negation, that is to say as a linguistic device usable to reverse the truth value of a sentence.

The second line of divergence concerns the forms of inference involving non-cognition on which each tradition focuses. Only Dharmakīrti distinguishes between the cognition of a property incompatible with the effect of the target-property and the cognition of the effect of a property incompatible with the target-property. It is interesting to notice that the first type of incompatibility is strictly equivalent to non-cognition as far as the transmission of truth values is concerned, which might be one explanation of the Jain disinterest for it. Conversely, only Māṇikyanandi is interested in the possibility of inferring the presence of the target-property from the non-cognition of a property incompatible with it since, again, Dharmakīrti here focuses on the possibility of inferring an absence.

The third important line of divergence between the two frameworks concerns the types of evidence that are active in inferences involving non-cognition. Whereas 11 forms of inference involving non-cognition are admitted in Dharmakīrti's *Nyāyabindu*, 16 forms are admitted in Māṇikyanandi's *Parīkṣāmukham*. First, this is due to the fact that Dharmakīrti rejects succession and coexistence as inferential evidence, therefore he also rejects non-cognition of succession and non-cognition of coexistence. Second, when it comes to the cognition of evidence incompatible with the target-property, which is considered by both

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[46]   *asti atra dehini duḥkham iṣṭa-saṃyoga-abhāvāt* / Ibid.

traditions as a type of non-cognition, Māṇikyanandi accepts to infer the absence of a given target-property, both from an effect incompatible with it and from a cause incompatible with it. As expected, Dharmakīrti accepts to infer the absence of a given target-property only from an effect incompatible with it. What is less expected is that he considers both the non-cognition of the cause and the non-cognition of the effect of a target-property as correct evidence for its absence. My hypothesis is that this is due to the fact that when the absence of a target-property is known thanks to the non-cognition of its effect or of its cause, no discourse on future event is involved; and that this was Dharmakīrti's main objection concerning cause as correct inferential evidence. By the way, this is also probably one good explanation for the fact that the material implication used by contemporary logicians is not a good candidate to express in a formal way the relationship between the evidence-property and the target-property. Indeed, material implication has several properties, amongst which is symmetry, and this epistemological concern that no discourse should be made on future events prevents such a symmetry. Actually, in an attempt towards a formal representation of these theories, as many logical connectors as there are types of evidence would be needed. I would like to stress the fact that these considerations are really at the junction between logic (recognition of certain patterns, and rules describing them, such as transitivity, types and functions of negations), epistemology (what a person can know) and argumentation (how to convince a given interlocutor).

In conclusion, this presentation is conceived as a first step for a more thorough analysis of the divergences between Jain and Buddhist conceptions of inference after Dharmakīrti. What would be especially useful, in relation to the conceptions of non-cognition in this line of analysis, would be to see if later Buddhist philosophers adopt a classification into different forms of inference; whether they drop the second type of incompatibility (*viruddha-upalabdhi*); whether they gain an interest in the non-cognition of properties incompatible with one another; or whether they state a rule of transitivity.

References and abbreviations

Balcerowicz 2005 P. Balcerowicz, Akalaṅka und die buddhistische Tradition: von der Nichtwahrnehmung von Unsichtbarem (*adṛśyānupalabdhi*) zur Allwissenheit. *Wiener Zeitschrift für die Kunde Südasiens* 49 (2005) 151–226.
Bhattacharya 1967 See PNT.
Desai 1991 See NB.
Ghoshal 1940 See PM.
Gillon and Hayes 1991 B. Gillon and R. Hayes, Introduction to Dharmakīrti's theory of inference as presented in *Pramāṇavārttikasvopajñavṛtti* 1–10. *Journal of Indian Philosophy* 19 (1991) 1–73.
Gnoli 1960 See PV and PVsV.
Gorisse 2015 M.H. Gorisse, The taste of the mango: a Jaina-Buddhist controversy on evidence. *International Journal of Jaina Studies* 11/3 (2015) 1–19.
Gorisse 2017 M.H. Gorisse, Logic in the tradition of Prabhācandra. In: *Oxford Handbook of Indian philosophy*, ed. J. Ganeri. Oxford 2017, 486–506.

Katsura 1992 S. Katsura, Dignāga and Dharmakīrti on *adarśanamātram* and *anupalabdhi*. *Asiatische Studien/Études asiatiques* 47 (1992) 222–231.

Kellner 2003 B. Kellner, Integrating negative knowledge into *pramāṇa* theory: the development of the *dṛśyânupalabdhi* in Dharmakīrti's earlier works. *Journal of Indian Philosophy* 31 (2003) 121–159.

Jain 1939 See LT.

LT Akalaṅka's *Laghīyastrayam*: *Akalankagranthatrayam*, ed. M.K. Shastri. Ahmedabad 1939.

NB Dharmakīrti's *Nyāyabindu*, ed. N.R. Desai. Ahmedabad 1991.

PKM Prabhācandra's *Prameyakamalamārtaṇḍa*, ed. M.K. Shastri. Delhi 1912/1990.

PM Māṇikyanandin's *Parīkṣāmukham*, ed. and tr. S.C. Ghoshal. Lucknow 1940.

PNT Vādi Devasūri's *Pramāṇanayatattvālokālaṃkāra*, ed. and tr. H.S. Bhattacharya. Bombay 1967.

PV and PVsV Dharmakīrti's *Pramāṇavārttika* and *Pramāṇavārttikasvavṛtti*. Chapter 1, ed. R. Gnoli. Roma 1960.

Shah 1967 N.J. Shah, *Akalaṅka's criticism of Dharmakīrti philosophy. A study*. Ahmedabad 1967.

Shastri 1912 See PKM.