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THE TASTE OF THE MANGO
A JAINA-BUDDHIST CONTROVERSY ON EVIDENCE

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1. Introduction

In the classical framework of Indian philosophy, the different schools of thought agree on the fact that the correctness of an inference relies on a special universal relation standing between the probans, or evidence-property, and the probandum, or target-property. In this framework, there is a controversy between Buddhist and Jain philosophers concerning the characteristics of this universal relation, which has not yet gained the attention it deserves. For the Jain side, this article will focus on the *Parīkṣāmukham* (henceforth PM), the *Introduction to Philosophical Investigation*, a treatise written by the Digambara monk Māṇikyanandi (9th c.). As for the Buddhist side, I will refer to the *Pramāṇavārttika* (PV), the *Essay on Knowledge*, as well as on the *Pramāṇavārttikasvavṛtti* (PVsV), the *Auto-commentary on the Essay on Knowledge*, of Dharmakīrti (7th c.). This selection is motivated, first by the fact that Māṇikyanandi borrows from Dharmakīrti's theory, which was a breakthrough in the domain of theories of inference. Second, because I aim at showing that it is also important for Māṇikyanandi to partake from it in order to develop a theory of inference easily recognizable as being specifically Jain. And in this respect, the position of Māṇikyanandi is particularly interesting. More precisely, the main Jain interlocutor of Dharmakīrti is Akalaṅka. Akalaṅka (720-780) was a Digambara philosopher who devoted core parts of his work at giving a systematic answer to Dharmakīrti's criticisms against Jain philosophy of knowledge.[1] In doing so, "Akalaṅka came out […] with a doctrine of *pramāṇas* typical of Jainas" (Dixit 1971: 143). But the presentation of Akalaṅka is very concise and unsystematic. Therefore, it became the task of later thinkers, such as Vidyānanda (9th c.) and Māṇikyanandi, to present a more developed and structured version of Akalaṅka's innovative theory. Māṇikyanandi's PM is such a presentation. In this paper, besides the PM, I will also exploit, when possible, Akalaṅka's *Laghīyastraya* (LT), the *Three Fragments*, and *Laghīyastrayavivṛti* (LTV), the *Auto-commentary to the Three Fragments*. What is more, the PM has been commented on in

[1] For a presentation of the main criticism put forward by Dharmakīrti against Jain philosophy of knowledge, see Balcerowicz 2006.

more details by the Digambara philosopher Prabhācandra (980-1065) in his *Prameyakamalamārtaṇḍa* (PKM), the *Sun that Grows the Lotuses of the Knowable*. When relevant, I will use some passages from this commentary. As for Dharmakīrti's view and attacks, I will present them as they are found especially in his PV, as well as in his PVsV, because they are the Buddhist works quoted in these Jain texts as far as the section I investigate is concerned.

1.1. Māṇikyanandi's Theory of Inference

First of all, inference (*anumāna*) is the cognitive process by which an epistemic subject acquires new knowledge using reasoning. More precisely, the goal of inference is to know that a property, referred to as "the target-property" (*sādhya*), is ascribed to a given object. And this is known by mere reasoning upon the already-established knowledge of the fact that another property, referred to as "the evidence-property" (*hetu*), is ascribed to the same object. In the third chapter of his PM, Māṇikyanandi describes inferential knowledge in the following terms:

> PM 3.14. Inference is knowledge of the target-property by means of [knowledge of] the evidence-property.[2]

The fact that reasoning upon the evidence-property is sufficient to know given characteristics of the target-property is based upon a necessary relationship, the invariable concomitance (*vyāpti*) that holds between the known evidence-property and the to-be-known target-property. Invariable concomitance is a sufficient basis for inference, because it ensures that whenever the evidence-property is present, the target-property is also present. In Māṇikyanandi's terms:

> PM 3.15. The evidence-property is characterised by the inevitability of its absence when the target-property is not there.[3]

In the Jain tradition, invariable concomitance is known by a separate cognitive process, a conjecture (*tarka*) taking the form of a direct grasp of universals, and is characterised by the "impossibility to be otherwise" (*anyathā-anupapatti*). According to Māṇikyanandi, there are

[2] PM 3.14: *sādhanāt sādhya-vijñānam anumānaṃ* ‖ In this paper, all translations are mine unless it is explicitly indicated otherwise.

[3] PM 3.15: *sādhya-avinābhāvitvena niścito hetuḥ* ‖

especially six situations in which the presence of such 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*) of it. The following general classification is found in the PM:

> PM 3.16. Invariable concomitance is the law of simultaneous and successive existence [between two properties].
> PM 3.17. Simultaneous existence holds either between two co-existents, either between a pervaded property and its pervasive property.
> PM.3.18. Successive existence holds either between a predecessor and its successor, either between an effect and its cause.[4]

An later on:

> PM 3.59. Affirmation [of the thesis] when one has grasped compatible [evidence with it] is six fold, namely [when the evidence-property is] a pervaded, an effect, a cause, a predecessor, a successor or a co-existent [of the target-property].[5]

1.2. Māṇikyanandi's Buddhist Influences and Jain Heritage

One noticeable characteristic of this account is that it can be traceable to the account of what counts as correct inferential evidence according to the Buddhist Dharmakīrti. Indeed, when Dharmakīrti sought the precise reasons why a target-property is always present when its evidence-property is, he introduced "the notion of *svabhāva-pratibandha* ('essential connection') as a basis for *avinābhāva* / *vyāpti*, thus providing the ontic foundation for valid reasoning" (Katsura 1992: 223). This theory was a breakthrough in theories of inference. As a consequence, not only Buddhist, but also non-Buddhist philosophers, integrated this theory within their conception of inference. But instead of the six types granted by Māṇikyanandi, the requirement that inferential reasoning relies only upon necessary relationships led Dharmakīrti to consider three types of inferential evidence as correct ones: (i) natural property (*svabhāva*); (ii) effect (*kārya*); and (iii) non-cognition (*anupalabdhi*). In fact, with such a

[4] PM 3.18: *saha-kramabhāva-niyamo avinābhāvaḥ* ‖ s*ahacārinor-vyāpya-vyāpakayoś ca sahabhāvaḥ* ‖ p*ūrva-uttaracāriṇoḥ kārya-kāraṇayoś ca kramabhāvaḥ* ‖

[5] PM 3.59: *aviruddha-upalabdhir vidhau ṣoḍhā vyāpya-kārya-kāraṇa-pūrva-uttara-sahacara-bhedāt* ‖

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 tree-ness, which is a natural property of the Sissoo. The same holds for causality, since it is not accidental that whenever there is smoke, there is also a fire. This is due to the very nature of the smoke, which is an effect of the fire. And cases of non-cognition are consequences of this state of affair also, since it is not accidental that, for example, whenever there is no tree, there is also no Sissoo. In the PV and further in the PVsV, Dharmakīrti introduces these three types of inferential evidence in the following way:

> PV 1.1. Evidence is of exactly three kinds, because the inseparability [of evidence from what it indicates] is restricted [to just those three kinds of evidence]. [Any property] other that those is spurious evidence.[6]
> PVsV 1.1.6. The three [kinds of] evidence are those that have the characteristic of being an effect, a natural property or non-apprehension. For example, there is fire here, because of smoke; This is a tree, because it is a Shinshapa tree. There is no water-jug on a certain specific site, because there is no apprehension of that which meets the conditions of an apprehension.[7]

This article deals with the causes and consequences of the fact that cause, predecessor, successor and coexistent that are granted by the Jain Māṇikyanandi are not granted by the Buddhist Dharmakīrti.[8] I will not investigate the case of non-apprehension. First, because the case of non-apprehension is considered as a subspecies of the "natural property" type of evidence. As a consequence, in Dharmakīrti's theory "there are really only two species of evidence rather the three that have been discussed so far" (Gillon & Hayes 1991: 50f.). Second, because there are eleven subtypes of non-apprehension according to Dharmakīrti and sixteen ones according to Māṇikyanandi. Therefore, such an analysis and comparison between the two frameworks calls for the need of another independent paper. This has been done in "Jain Conceptions of Non-cognition: A Dialogue with Dharmakīrti on Inferential Evidence."[9]

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[6] PV_1 1.1: *tridhā eva saḥ | avinābhāva-niyamādd hetv-ābhāsās tato 'pare ||* English translation in PV_2 1.1.

[7] $PVsV_1$ 1.1.6: *ta ete kārya-svabhāva-anupalabdhi-lakṣaṇās trayo hetavaḥ | yathā 'gnir atra dhūmāt | vṛkṣo 'yaṃ śiṃśapātvāt | pradeśa-viśeṣe kvacin na ghaṭa upalabdhi-lakṣaṇa-prāptasya-anupalabdheḥ |* English translation in $PVsV_2$ 1.1.6.

[8] For a comparison between Jain and Buddhist conceptions of the general characteristics of inference, such as the minimal set of inferential statements required to display a convincing inference within a philosophical disputation, see Gorisse 2015.

[9] Gorisse to appear.

2. Inferences Based on Simultaneous Existence

2. 1. Pervaded Property as Inferential Evidence

To begin with, the first type of invariable concomitance granted by Māṇikyanandi does not offer much discrepancy with the one granted by Dharmakīrti. More precisely, this type of invariable concomitance is the one that holds between a pervaded property and its pervasive property (*vyāpya-vyāpaka*). In other words, it defines a type of inference related to class identity. These cases are the less problematic ones, since they are cases of – to phrase it in an anachronistic way - analytic inclusion of a class within another. The example put forwards by Māṇikyanandi in PM 3.65 is the following one:

Invariable concomitance (being a product, enduring change)
Evidence: Sound is a product

Inferential conclusion: Sound endures changes [10]

Here, it is worth mentioning that when Māṇikyanandi speaks about "pervaded property" (*vyāpya*) and Dharmakīrti about "natural property" (*svabhāva*), they first intend the relation between, e.g., the property of being a cow and the property of being an animal. That is to say a relation between two predicates that do not have the same extension. If we consider that these predicates denote natural kinds, then "included properties" are species, and "inclusive properties" genus.[11] In this line, only included properties are good evidence to infer the presence of their respective inclusive 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. And second, Māṇikyanandi and Dharmakīrti sometimes also intend the relation between, e.g., the property of being perishable (*anityatva*) and the property of being a product (*kṛtakatva*); hence a relation in which the two predicates are co-extensible. In this case, no restriction needs to be imposed in order to draw correct inferences. Both conceptions are in the same category

[10] PM 3.65: *pariṇāmī śabdaḥ kṛtakatvāt* ||

This schematic presentation allows to keep implicit the epistemic conditions. In other words, instead of stating explicitly "I know that sound endures changes," the inferential bar means that what is below is an inferred piece of knowledge, and what is above are the premises upon which this piece of knowledge relies. The main problem with this schematic representation is that it insists on the conclusion, whereas the Indian classical presentation insists on the premises considered as justifications.

[11] We are used to conceive 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 specie should be considered here also.

"natural property," because both cases are concerned with 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. This explains why the expression "natural property of *x*" is sometimes used to refer to *x* itself. It is especially important to keep in mind these differences of scope when inference is drawn from situations of non-cognition, which define situations from which absences are known. In these situations, only the absence of the pervasive property is sufficient evidence to infer the absence of the pervaded property, nothing can be inferred from the absence of the pervaded property.

To this point, Māṇikyanandi and Dharmakīrti agree on what counts as correct inferential evidence. I will now focus on the second type, in which the divergences start.

2. 2. First Disagreement: Co-Existent as Inferential Evidence

The second type of invariable concomitance granted by Māṇikyanandi is the one that holds between an evidence-property and a target-property that are co-existents (*sahacara*). This type of invariable concomitance gathers together the cases in which two things different *and not causality related* are never seen one without another. For example, it is sufficient to see one face of a coin, say tails, in order to know that the other face is heads. When presenting the inference based on the invariable concomitance between two co-existents, Māṇikyanandi uses in PM 3.70 the following example, henceforth the "mango-inference":

> **Invariable concomitance** (having the taste of *x*, having the colour of *x*)[12]
> **Evidence:** This has the taste of a [ripe] mango
> ---
> **Conclusion:** This has the colour of a [ripe] mango[13]

This type of inference accounts for the fact that when one chooses fruits or vegetables in a shop, one does not need to taste each piece of them, because one can for example infer the taste by seeing the appearance, and one can make his choice accordingly. Dharmakīrti recognizes the mango-inference as a correct one, but does not recognize it as an example of a

[12] The Sanskrit expression "*rūpa*" is usually translated into the English expression "form." But it is obvious that something might have the taste of a mango without having its precise shape, as in the case of morsels of a mango. In order to avoid this problem, the translators Gillon and Hayes have chosen the broader English expression "visible properties", see PV_2 1.9. I follow another interesting proposition to render it by "colour" (Shah 1967: 257).

[13] PM 3.70: *asty atra mātuliṅge rūpaṃ rasāt* ||

separate category of invariable concomitances named "co-existent." Indeed, Dharmakīrti shows that the correctness of the mango-inference can be explained in terms of natural property and effect:

> PV 1.9. Knowledge through taste of the visible properties and so forth that are dependent upon the same totality [of causes] [comes about] by means of inferring a property of the cause, like [the inference through] smoke of the changing state of the kindling.[14]

To explain, taste and colour are both co-effects of the same totality of causes, namely the same stage of ripeness of the fruit. In the same way, the same cause, namely the activated fire, causes both the smoke and the changing state of the kindling. Henceforth, we are legitimate to infer the taste of a fruit from its shape, as well as the state of the kindling from the state of the smoke. But in doing so, we do not infer the presence of a property from the knowledge of the presence of its co-existent property. Rather, we draw the following complex inference, involving imbedded invariable concomitances:

Invariable concomitance (effect *n* of *x*, effect *m* of *x*)
Evidence: This has the taste of a [ripe] mango (effect 1)

Invariable concomitance (being *x*, having the taste of *x*)
Evidence: This has the taste of a mango (effect 1)
Conclusion: This is a mango (cause)

Conclusion: This has the colour of a [ripe] mango (effect 2)

Invariable concomitance (being *x*, having the colour of *x*)
Evidence: This is a mango (cause)
Conclusion: This has the colour of a [ripe] mango (effect 2)

In plain words, this complex inference relies upon the two following embedded invariable concomitances: (i) wherever there is the taste of a ripe mango, there is a ripe mango, (ii) wherever there is a ripe mango, there is the colour of a ripe mango. In conclusion, making explicit the different steps of the mango-inference enables one to realize that one does not

[14] PV_1 1.9: *eka-sāmagry-adhīnasya rūpa-āde rasato gatiḥ | hetu-dharma-anumānena dhūma-indhana-vikāravat ||* English translation in PV_2 1.9.

need to postulate the existence of the category "co-existent" in order to account for these correct inferences. And the principle of parsimony prevents to postulate any superfluous category in a philosophical conceptualization.

It is also interesting to notice that this inference necessitates the acceptance of transitivity. This is not a problem, neither from the Buddhist side, nor from the Jain one. Māṇikyanandi explicitly accepts it when he claims that:

> PM 3.90. Evidence that occurs in a complex sequence should be included in this precise [list of primary types of inferential evidence].[15]

To explain, when an inference relies on a piece of evidence itself known thanks to another inference, and that this other inference relies on a piece of evidence itself known thanks to another inference, etc., Māṇikyanandi teaches us that these successive inferences can be considered as a unique complex one. In consequence, only one invariable concomitance is considered as being the active invariable concomitance of this complex inference. This, in turn, enables to establish the correctness (resp. incorrectness) of the given inference, since the type of invariable concomitance plays a role in the establishment of its correctness (resp. incorrectness).[16]

The next step undertaken by Māṇikyanandi is to show that this Buddhist refutation of co-existent properties as a separate type of evidence goes against the consistency of their own general theory of inference, especially in relation to what can be inferred from causally-related events. In order to understand this move, it is necessary to first introduce the conception of inference based upon causally-related events for the two schools.

3. Inferences Based on Successive Existence

3.1. Second Disagreement: Cause and Effect as Inferential Evidence

First of all, the invariable concomitance between an effect and its cause (*kārya-kāraṇa*) is the canonical model for the presentation of an inference schemata. The most famous case of it being that somebody, despite the fact that he cannot see that there is a fire on a remote hill, can infer that there is one from his observation of smoke on this hill. The popularity of this

[15] PM 3.90: *param-parayā saṃbhavat sādhanam atra eva antarbhāvanīyam* ||

[16] For example, I have already mentioned that whereas a pervaded property is sufficient evidence for the presence of its pervasive property; nothing concerning the presence or absence of the pervasive property can be inferred from the absence of this pervasive property. On the contrary, the presence (resp. absence) of an effect is sufficient evidence to infer the presence (resp. absence) of its cause.

type of inference based on causality is due to the fact that it turns an inference into a scientific explanation, that is to say, into an investigation on the causes of a given phenomenon. When presenting this type of inference in PM 3.66, Māṇikyanandi uses the following example:

> **Invariable concomitance** (possessing speech ability, possessing intelligence)
> **Evidence:** There is speech ability in this individual
> ---
> **Conclusion:** There is intelligence in this individual[17]

In this case, the invariable concomitance is due to a causal relation between speech ability, which is the effect, and intelligence, which is its cause. Now, although Jainas and Buddhists agree on this example, they would not agree on its converse, because Dharmakīrti considers that only the effect, and not the cause, can serve as evidence in inferences. The reason of this is that one can never be sure that the two following pre-requisites are being fulfilled: (i) no impediment is blocking the potency of the given cause to produce its effect; (ii) all the conditions required for the production of the effect at stake are present.

At this point, Māṇikyanandi uses Dharmakīrti's formulation of the mango-inference in order to show that even they recognize the correctness of inferences grounded on the presence of a cause and, therefore, that they should accept that a cause should be considered as evidence enabling the inference of its effect. In Māṇikyanandi's words:

> PM 3.60. Those who accept to infer the visible properties [of a fruit] by means of the inference of the totality [of the conditions of the presence of this fruit, itself obtained] from the taste [of this very fruit], those accept too that the cause of something is evidence [for the presence of this thing] wherever no other conflicting cause is blocking off the efficiency [of the cause at stake].[18]

If we recall the Buddhist version of the mango-inference into two steps, namely (i) wherever there is the taste of a ripe mango, there is a ripe mango, (ii) wherever there is a ripe mango, there is the colour of a ripe mango, it is clear that granting the last step amounts to granting the fact that the presence of a cause (a ripe mango) can be used as evidence for the

[17] PM 3.66: *asty atra dehini buddhir vyāhāra-ādeḥ* ‖

[18] PM 3.60: *rasād eka-sāmagry anumānena rūpa-anumānam icchadbhir iṣṭam eva kiñcit kāraṇaṃ hetur yatra sāmarthyā-pratibandha-kāraṇa-antarā-vaikalye* ‖

presence of its effect (the colour of a ripe mango). In conclusion, either Buddhist philosophers accept that co-existent properties are considered as a separate type of evidence, or they accept that a cause is considered as good evidence.

But a closer look on Dharmakīrti's text reveals that, given appropriate restrictions, he does consider it possible to draw an inference in which causes are used as evidence. Indeed, he wrote that:

> PVsV 1.7.1. […] 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 that is inferred.[19]

The issue being tackled here by Dharmakīrti is that when we deal with future events, we deal with potential phenomena, not actual ones. And when he refuses that cause is being considered as correct evidence, he is only indicating that the conclusion of such an inference would have the status of a potentiality, because "the beautifully coloured apple that showed promise of tasting sweet may turn out to have a bitter taste" (Gillon & Hayes 1991: 69). Therefore, it should not be treated as the other types of inference, in which the conclusion has the status of an actuality.

In conclusion, Dharmakīrti rescued cause as evidence given appropriate restrictions. What he is saving in doing so is nothing less that our ability to make predictions. Indeed, if a cause could never be used as 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 that 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.

Going back to our argument, this move from Dharmakīrti, that a cause can be used as evidence given appropriate restrictions, reinstates his observation that the mango-inference is correct without stipulating the existence of the category of "co-existence," the only restriction being that the conclusion of the mango-inference has the status of a potentiality.

But let me go one step further and propose the following hypothesis: Māṇikyanandi's point here might be to say that this status of potentiality is precisely the difference which makes it necessary to draw a distinction between causal evidence and co-existent evidence.

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[19] $PVsV_1$ 1.7.1: […] *kevalaṃ samagrāt kāraṇāt kārya-utpatti-saṃbhavo 'numīyate samagrāṇāṃ kārya-utpādana-yogyatā-anumānāt | yogyatā ca sāmagrī-mātra anubandhinī iti svabhāva-bhūta eva anumīyate*. English translation $PVsV_2$ 1.7.1.

More precisely, the principle of parsimony prevents to postulate any superfluous category in a philosophical conceptualization. Yet, with the addition of the category "causal evidence involving no future event," labeled "co-existent" in Jainism, what is gained is that the conclusions of inferences relying on this type of evidence can have the status of an actuality. From this, co-existent evidence should be accepted as a fully separate category.

3.2. Third Disagreement: Inference Based on Worldly Regularities

The next move from Māṇikyanandi is to show that Buddhist philosophers cannot give an account of all the correct types of inference one is legitimate to draw, because neither in terms of natural properties, nor in terms of cause, it is possible to give an account of inferences based on the invariable concomitance between two phenomena *separated by a time interval*. This last explicit attack from Māṇikyanandi to Dharmakīrti's theory of the two types of inferential evidence is used to defend the invariable concomitance between a predecessor and its successor (*pūrva-uttaracara*) as a separate type of invariable concomitance. This defense is necessary, since Dharmakīrti declared as spurious any evidence that is neither a natural property, nor a cause.

Let us examine the Jain conception of invariable concomitance between a predecessor and its successor. First of all, this type of invariable concomitance concerns cases of inference related to worldly regularities. The example put forwards by Māṇikyanandi in PM 3.68 is the following one, henceforth the "Pleiades-inference":

Invariable concomitance (rising of the Pleiades [at t_n], rising of Aldebaran [at t_{n+1}])[20]
Evidence: The Pleiades are rising

Conclusion: Aldebaran will rise soon[21]

In such a situation, the attested invariable concomitance is due to a worldly regularity by means of which the rising of the stars is something predictable. Henceforth, the rising of one star can be known from the rising of another one, even though there is no relation of causality, nor of nature, between the rising of these two different celestial elements. By the way, the Arabic name "Aldebaran" is another recognition of the known succession between these two

[20] I have introduced the invariable concomitance as a relation between two properties. In this example too, it is possible to consider two properties if we understand that these two *phenomena* are properties of a given state of the sky.

[21] PM 3.68: *udeṣyati śakataṃ kṛttika-udayāt* ||

stars, since it means "the follower." This example, as well as the discrepancy with the Buddhist theory on this topic, are first found in Akalaṅka:[22]

> LT 14. From the rising of The Pleiades, one knows that Aldebaran will rise, [the same way one knows that] the sun will rise tomorrow or [that] there will be an eclipse.
>
> LTV 14.1. Hence, this knowledge that concerns future [events] and that is a correct knowledge, contradicts the number of necessary relations [advocated by Buddhist philosophers].[23]

In this argumentative line, Māṇikyanandi takes a further step and show that causality and natural properties fail to give an account of events separated by a time interval, not only directly, but also indirectly, because any complex inference involving only this two types of evidence will *by definition* fail to deal with time intervals. Therefore, there is a domain that the Buddhist theory cannot cover, even with embedded invariable concomitances. The reason of this is that identity of nature and causality concern only events that take place without any time interval. Māṇikyanandi states this "time interval argument" as follow:

> PM 3.61. Concerning the relation of predecessors and relation of successors, they are neither identity, nor causality, because those two are not known after a time interval.[24]

Māṇikyanandi's commentator, Prabhācandra,[25] explains this in more details in the following quote:

> PKM 3.61.1. Because the relation of identity of nature is known [to hold] only between synchronous identical [phenomena], as in between created things and perishing things. And because the relation of causality [holds]

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[22] This controversy has been presented with precise astronomical descriptions in Clavel 2014.

[23] LT_1 14: *bhaviṣyat pratipadyeta śakaṭaṃ kṛttika-udayāt* | *śva āditya udetā iti grahaṇaṃ vā bhaviṣyati* || LTV_1 14.1: *tad etad bhaviṣyad-viṣayam avisaṃ-vādakaṃ jñānaṃ pratibandha-saṃkhyāṃ pratiruṇaddhi* | This has also been translated into French in LT_2 14 and LTV_2 14.1.

[24] PM 3.61: *na ca pūrva-uttaracāriṇos tādātmyaṃ tadutpattir vā kāla-vyavadhāne tad-anupalabdheḥ* ||

[25] For more on the status of this author in the Jain tradition of philosophy of knowledge, see Soni 2014.

only between continuous [phenomena], as in between fire and smoke. Again, it is not [known to hold between two phenomena that take place] with a time interval, because there would be undesired consequences.[26]

Then, Prabhācandra explains that the following verse of Māṇikyanandi is to be conceived as a reply to the objection consisting in saying that the example of the Pleiades and Aldebaran is traceable to causality. According to Balcerowicz (2011: 43), this objection was made by the Buddhist Prajñākaragupta. In order to counter such an objection, Māṇikyanandi provides two other examples clearly not traceable to causality:

PM 3.62. Omens [of death] and [future] waking state are not causes for, respectively, death and [previous] awareness of the waking state.

PM 3.63. Because the inevitableness of the presence of these [effects] is an event unconnected with these [causes].[27]

To explain, omens of future death are considered as sufficient evidence for knowing the future event of death. The same way, a future state of awakening is considered as sufficient evidence for knowing the past conscious of a state of awakening. It is moreover agreed that both these series of events engage events that do not share a common period of occurrence. What is more, nobody will disagree on the fact that these events are in no way causally related. Therefore, it should be accepted that it is possible to draw inferences concerning events not causally related and separated by an interval of time.

At this point of the discussion, Prabhācandra adds another interesting remark, when he tackles the objection according to which if it is possible to draw inference between events that are not causally related, then there is no more ontic foundation to inferences:

PKM 3.62-3.3. If you reply "admittedly, if there is no presence of effect and cause in this [example], then how inferences other [than inferences related

[26] PKM 3.61.1: *tādātmyaṃ hi sama-samayasya eva kṛtakatva-anityatva-ādeḥ pratipannam* | *agni-dhūma-ādeś ca anyonyam-avyavahitasya eva tadutpattiḥ, na punar vyavahita-kālasya atiprasaṅgāt* |

[27] PM 3.62: *bhāvy-atītayor maraṇa-jāgrad-bodhayor api na ariṣṭa-udbodhau prati hetutvam* ‖ PM 3.63: *tad-vyāpāra-aśritaṃ hi tad-bhāva-bhāvitvam* ‖

> to causality and essence are possible] from only one observation?" We will answer that [it is made possible] thanks to the impossibility otherwise."[28]

In other words, Prabhācandra accepts that inference holds even without ontic foundations such as causality and identity of nature, because of the necessary and sufficient inferential strength of the impossibility otherwise (*anyathā-anupapatti*). We have seen that in the Jain tradition, invariable concomitance is known by a separate cognitive process, a conjecture (*tarka*) that grasps the impossibility to be otherwise, which is the Jain equivalent to the Buddhist triple characteristic (*trairūpya*) of evidence.[29] In this line, whereas Dharmakīrti grounds the validity of invariable concomitance on ontological relations, Jain philosophers consider that the only means to establish the validity of the invariable concomitance is the direct conjectural grasp of the impossibility to be otherwise.[30] This was already stated by Akalaṅka:

> LTV 12.1. Indeed, this is not possible to know essence and causality without the conjecture of the impossibility otherwise. Because even without them [essence and causality], it is established that [evidence has only] one characteristic.[31]

Conclusion

In PM 3.59, Māṇikyanandi announces that concerning inferences leading to the positive ascription of a property to a given object from the previous knowledge of compatible evidence with it, there are six situations in which the presence of an invariable concomitance between the target-property and the evidence-property is unquestionable, namely when the evidence-property is pervaded by the target-property, or when it is its effect, its cause, its

[28] PKM 3.62-3.3: *nanu yady atra kārya-kāraṇa-bhāvo na syāt kathaṃ tarhi eka-darśanād anya-anumānam iti cet avinābhāvāt iti brūmaḥ*|

[29] There are Jain arguments that aim at showing that these three Buddhist characteristics are neither necessary, nor sufficient, to ground correct inference and that they are ultimately only indicatives of the impossibility otherwise. This discussion goes beyond the scope of this article and can be seen for example in PM 3.35-6.

[30] This is also what explains the requirement of a single characteristic for the invariable concomitance. Indeed, a plurality of characteristics entails too much complexity to be intuitively graspable. For a detailed philosophical analysis of this cognitive process, see Daye 1979.

[31] LTV_1 12.1: *na hi tādātmya-tadutpattī jñātuṃ śakyete vinā anyathānupapatti-vitarkeṇa tābhyāṃ vinā eva eka-lakṣaṇa-siddhiḥ*. Also translated into German in Balcerowicz 2005: 199.

predecessor, its successor or its co-existent (see 1.1). Before describing these six situations, he devotes five verses to tackle the discrepancies between his conception and the one of Dharmakīrti, who considers that only two such situations hold, namely when the evidence-property is a natural property or an effect of the target-property. In this paper, I have presented these discrepancies along two main lines of divergence. First, both Māṇikyanandi and Dharmakīrti agree on the possibility to infer the colour of a mango from the knowledge of its taste. They diverge when Dharmakīrti explains the correctness of the mango-inference in terms of the following embedded invariable concomitances relying on causality: wherever there is the taste of a ripe mango, there is a ripe mango; and wherever there is a ripe mango, there is the colour of a ripe mango (see 2.2). In reaction to this, Māṇikyanandi demonstrates that this move forces Dharmakīrti to accept that a cause (a ripe mango) can serve as a good piece of evidence (for the colour of the ripe mango). But Dharmakīrti's theory is left un-attacked by this observation, since he already grants inference based upon causal evidence, given that the status of its conclusion is that of a potentiality. This is where Māṇikyanandi's theory allows to go further and to say that the category "co-existence" can be considered as a good means to prevent speech on future events while dealing with causal evidence, and therefore to be able to draw actual, and not potential, conclusions by means of causal inferences (see 3.1). The second line of divergence concerns inferences based upon worldly regularities. Not only this type of inference is reliable, but also it cannot be explained in terms of causality, nor of essence, because none of these two can deal with events that are separated by a time interval (see 3.2).

At the beginning of this article, I announced that I will tackle the question whether these divergences are indicative of a theory of inference specifically Jain. First of all, it seems that these divergences are the sign that Buddhist philosophers ground inference upon a necessary relation, whereas a universal relation is sufficient for the Jain conception. To have a good grasp on the difference between being universal (always true) and necessary (always true thanks to one's very nature), let us consider the two following inferences:

(i) There is a tree, because there is an oak.
(ii) Aldebaran will rise soon, because the Pleiades has just risen.

In Western philosophy, Hume was famous for his treatment of a case similar to the second inference, namely "the sun will rise tomorrow."[32] He used this example in order to indicate that even though predictions are possible, scientific certainty is more demanding. "The sun will rise tomorrow" is a practical certainty effective as a guideline for everyday life

[32] By the way, it is interesting to notice that with a different agenda in mind, Akalaṅka also used this example of tomorrow's rise of the sun in LT 14.

behavior, in the sense that nobody should act as if the sun was not going to rise tomorrow. Yet, it is not a scientific certainty, since it is not absolutely impossible that the Sun will disappear tomorrow. In the same way, it is possible that the star Aldebaran disappears. As a consequence, the inference "Aldebaran will rise soon, because the Pleiades has just risen" would not be true anymore. On the contrary, no tree might exist anymore, it will not change the fact that if there is an oak here, it is entirely impossible that there is no tree here. This inference would remain true. In other words, only the link between a natural property and its object, and the link between a cause and its effect, are necessary ones. Therefore, it seems that Jain philosophers are not seeking necessity when they also accept (i) inferences based on worldly regularities, concerning both successive events as in the Pleiades-inference and co-existent ones as in the mango-inference; and (ii) inferences from a cause, that is to say inferences relying on external factors for its conclusion, the presence of the effect, to become an actuality. I would like to suggest that the reason of this acceptance is that the regularity of worldly phenomena granted by Jain philosophers is strong enough to ensure necessity even in these cases. More precisely, in the Jain cosmogony it is considered that after the universe is destroyed, it manifests itself again, endures, is again destroyed, and so on in an infinite circle of manifestations. In this way, even if the Pleiades die, *their nature is such* that at the next manifestation of the universe, they will again be followed by Aldebaran. Hence, there is nothing such as an accidental character of the universal concomitance holding between events of this type. On the contrary, the invariable concomitance can be considered as a necessary concomitance properly speaking.

In conclusion, the main motives identifiable in respect to the constitution of a Jain philosophical identity with reference to the question of inferential evidence is first, the fact that the search for necessity does not invalidate inferences based upon worldly phenomena thanks to the regularity granted in Jain cosmology. And second, the fact that the direct conjectural grasp (*tarka*) of the impossibility to be otherwise is the means to establish the validity of invariable concomitance. For further research, it would be interesting to investigate the reasons why Jain philosophers are the only ones in the Indian tradition to present such a justification of invariable concomitance as a separate cognitive process. I would especially like to pursue this line of research with the following aspects in mind: first, the Jain epistemological theory of particular-in-universal facilitates the epistemic access to one from the other; second, Jain metaphysics allows for omniscient beings, therefore authoritative discourses, as well as the possibility of being exhaustive. This last point is theorized in a meticulously developed meta-language and implemented, as far as the validity of invariable concomitance is concerned, in the pragmatic requirement of verifying that no counter-example occurs, by means of an exhaustive survey of the situations in which one of the relata of this invariable concomitance is present.

BIBLIOGRAPHY

Primary Sources

LT_1 Akalaṅka's *Laghīyastraya*. Edited by Mahendra Kumar Jain. In: *Akalankagranthatrayam. Svopajñavivṛtisahitam Laghīyastrayam, Nyāyaviniścayaḥ, Pramāṇasaṅgrahaśca*. Ahmedabad: Saraswati Pustak Bhandar, 1939/1996 (Singhi Jaina Granthamālā 12).

LT_2 & LTV Akalaṅka's *Laghīyastraya* and *Laghīyastrayavivṛti*. Translated into French by Anne Clavel. In: Théories de la Connaissance dans le Laghīyastraya d'Akalaṅka. PhD-dissertation. Lyon University, 2008.

PKM Prabhācandra's *Prameyakamalamārtaṇḍa*. Edited by Mahendra Kumar Shastri. In: *Prameyakamala-Mārtaṇḍa by Shri Prabha Chandra*. Delhi: Sri Satguru Publication, 1912/1990 (Garib Dass Oriental Series 94).

PM Māṇikyanandi's *Parīkṣāmukham*. Translated by S. C. Ghoshal. In: *Parīkṣāmukham*. Lucknow: The Central Jaina Publishing House, 1940 (Reprinted in *The Sacred Books of the Jainas* 11. Delhi: Today's and Tomorrow's Printers and Publishers, 1990).

PV_1 & $PVsV_1$ Dharmakīrti's *Pramāṇavārttika* and *Pramāṇavārttikasvavṛtti*. Edited by Raniero Gnoli. In: *The Pramāṇavārttikasvavṛtti of Dharmakīrti: The First Chapter with the Auto-commentary*. Roma: Istituto Italiano per il media et Extremo Orient, 1960 (Series Orientale Roma 23).

PV_2 & $PVsV_2$ Dharmakīrti's *Pramāṇavārttika* and *Pramāṇavārttikasvavṛtti*. Translated by Brendan Gillon & Richard Hayes. In: "Introduction to Dharmakīrti's Theory of Inference as Presented in *Pramāṇavārttikasvopajñavṛtti* 1-10." *Journal of Indian Philosophy* 19 (1991) 1-73.

Secondary Sources

Balcerowicz, Piotr. "Akalaṅka und die Buddhistische Tradition: Von der Nicht-wahrnehmung von Unsichtbarem (*adṛśyânupalabdhi*) zur Allwissenheit." *Wiener Zeitschrift für die Kunde Südasiens* 49 (2005) 151-226.

Balcerowicz, Piotr "Implications of the Buddhist-Jaina Dispute over the Fallacious Example in *Nyāya-bindu* and *Nyāyâvatāravivṛti." Studies in Jaina History and Culture*. Edited by Peter Flügel, 117-153. London: Routledge, 2006 (Routledge Advances in Jaina Studies 1).

Balcerowicz, Piotr. "Prabhācandra's *Prameyakamalamārtaṇḍa* on Māṇikyanandin's *Parīkṣāmukha*." *Encyclopedia of Indian Philosophies* 12: *Jaina Philosophy* 2. Edited by Piotr Balcerowicz & Karl Potter, 85-211. Delhi: Motilal Banarsidas, 2011.

Clavel, Anne. "Can the Rise of Rohiṇī be Inferred from the Rise of Kṛttikā? A Buddhist-Jaina Controversy." *Buddhist and Jaina Studies.* Proceedings of the Conference in Lumbini, February 2013. Edited by Jay Soni, Michael Pahlke & Christoph Cüppers, 341-366. Lumbini: Lumbini International Research Institute, 2014 (LIRI Seminar Proceedings Series 6).

Daye, Douglas Dunsmore. "Circularity in the Inductive Justification of Formal Arguments (*tarka*) in Twelfth Century Indian Jaina Logic." *Philosophy East and West* 29, 2 (1979) 177-188.

Dixit, Krishna Kumar. *Jaina Ontology*. Ahmedabad: L. D. Institute of Indology, 1971 (Lalbhai Dalpatbhai Series 31).

Gillon, Brendan & Richard Hayes. "Introduction to Dharmakīrti's Theory of Inference as Presented in *Pramāṇavārttikasvopajñavṛtti* 1-10." *Journal of Indian Philosophy* 19 (1991) 1-73.

Gorisse, Marie-Hélène "Is Inference a Linguistic or a Cognitive Process? A Line of Divergence between Jain and Buddhist Classifications." *Puṣpikā. Tracing Ancient India Through Texts and Traditions: Contributions to Current Research in Indology* 3. Edited by Robert Leach & Jessie Pons, 1-25. Oxford: Oxbow Books, 2015.

Gorisse, Marie-Hélène. “Jain Conceptions of Non-cognition: A Dialogue with Dharmakīrti on Inferential Evidence.” *Proceedings of the Fifth International Dharmakīrti Conference*. Edited by Sara Mc Clintock, Horst Lasic, Patrick Mc Allister & Birgit Kellner. Vienna: Academy of Austrian Sciences Press (to appear).

Katsura, Shory. “Dignāga and Dharmakīrti on *Adarśanamātram* and *Anupalabdhi*.” *Asiatische Studien/études asiatiques* 47 (1992) 222-231.

Shah, Nagin J. *Akalaṅka’s Criticism of Dharmakīrti Philosophy: A Study*. Ahmedabad: L.D. Institute of Indology, 1967.

Soni, Jayandra. “Prabhācandra’s Status in the History of Jain Philosophy.” *International Journal of Jaina Studies* 7-9 (2014) 510-536.