

On the Determination of Causation by Dharmakīrti

by
Eli Franco

One of the benefits of reading new translations is not only to learn new things, but also to find out that things one took for granted and thought to be generally accepted were not at all so. I had such an experience last year when reading the awe-inspiring translation of the logical portions of the PVSV by Ernst Steinkellner.¹ To my surprise, his interpretation of the relationship between cause and effect, and especially their putative resemblance in the famous discussion in PVSV on v. 34, were not quite what I took to be the case when I wrote on the same passage some twenty five years ago. I am, therefore, very grateful to Steinkellner to have inspired me to take a fresh look at an old problem. My (not insubstantial) disagreement with Steinkellner on the topic of this paper detracts neither from my admiration for the great scholar who has been a singular force in our discipline for the past half a century nor from my gratitude for his friendship and support ever since I took his seminar on *Vādanyāya* at the University of Vienna in 1981.

On the alleged similarity between cause and effect

The passage in Steinkellner's book that took me by surprise concerns the determination of the relationship between cause and effect, where Steinkellner argues at some length that cause and effect must be of the same kind rather than similar. I do not know to what extent this opinion is prevalent. He refers specifically to John Taber and Toshikazu Watanabe,² who propose different notion of similarity. However in Watanabe's case, I fail to see that he assumes the similarity or identity to be between causes and effects. Taber informs me in personal communication that his suggestion of similarity was only tentative. It is based on the fact that in the *Pramāṇasiddhi* chapter Dharmakīrti argues that cognition can only arise from cognition, senses only from senses, breath only from breath and so on. This is certainly true, but the question that I want to raise here is whether such similarity is essential or accidental to causal relationship.

Summarising his interpretation that cause and effect must belong to the same kind, Steinkellner concludes (2013 II: 213):

Anders gesagt: "Rauch" ist eine Art der Gattung "Feuer." Das heißt, er ist etwas, das "feuerartig" ist. Er ist eben so nicht "ähnlich" oder "gleich" einer Ursache, sondern kann, weil er seine wesentlichen Beschaffenheiten dieser Ursache verdankt, als eine Art der Gattung der Ursache beurteilt werden.

¹ Steinkellner 2013.

² See Taber 2003: 490 and 492f., and Watanabe 2004: 58–60 referred to in Steinkellner 2013 II: 211f., n. 366.

Put differently, “smoke” is a species of the genus “fire.” That is to say, it is something “fiery.” It is thus not “similar” or “equal” to [its] cause; rather, because it owes its special properties to its cause, it can be judged to be as a species of the genus of the cause.

My first contention does not only concern the understanding of the similarity – whether it means appertaining to the same kind, the same species or the same genus – but is more radical: Cause and effect are not, or do not have to be, of the same species or the same kind. They don’t even have to be similar. Furthermore, I claim that this question is not at all addressed in the passage in question (PVSV on v. 34). Rather, what Dharmakīrti maintains in this passage is that causes of the same kind produce effects of the same kind. In other words, the similarity, or the appertainment to same kind, is between causes among themselves and effects among themselves, not between causes and effects.³ To substantiate this claim I suggest to take a close look at the passage in question (PVSV 22.10–19 on 34cd):

*anyahetukatvān nāhetukatvam iti cet / na / tatrāpi tulyatvāt / tadabhāve ’py a-
gnau bhavatīti / katham vā tato ’nyato vātajjananasvabhāvād bhavet / svayam
atatsvabhāvasyājānanāt / tasyāhetutā syāt / na vai sa eva bhavati tādrśasya
bhāvāt / anyādrśād bhavan katham tādrśaḥ syāt / tādrśād dhi bhavan tādrśaḥ
syāt / anyādrśād api tādrśo bhāve tacchaktinīyamābhāvān na hetubhedo bhe-
daka ity akāraṇaṃ viśvasya vaiśvarūpyaṃ syāt / sarvaṃ vā sarvasmāj jāyeta
(read: jāyeta) / tasmāt kāraṇabhedābhedābhyāṃ kāryabhedābhedau / tan na
dhūmo ’rthād dr̥ṣṭākāravijātīyād bhavaty ahetukatvaprasaṅgāt /*

Steinkellner’s translation⁴ (2013 I: 55):

(Einwand:) “Weil er eine andere Ursache haben (kann), ist er [auch dann, wenn er ohne Feuer vorhanden ist] nicht ohne Ursache.” (Antwort:) (Das ist) nicht (der Fall), denn auch im Falle dieser (anderen Ursache) [wäre die Ursachelosigkeit] die gleiche, denn, auch wenn diese (andere Ursache) fehlt, ist (der Rauch) beim (Vorhandensein von) Feuer (dennoch) vorhanden. Oder weshalb könnte er aus diesem oder einem anderen entstehen, wenn **(beide)** nicht das Wesen^N haben ihn hervorzubringen? Weil das, was selbst nicht dieses Wesen^N (ihn hervorzubringen) hat, ihn nicht hervorbringt, wäre dieser (Rauch nichts als) ursachelos.

(Einwand:) (Aus der anderen Ursache) entsteht ja nicht gerade dieser (gewöhnlich vom Feuer hervorgebrachte Rauch), denn es entsteht ein derartiger (*tādrśa*). (Antwort:) **Wieso ist er ein derartiger (*tādrśa*), wenn er aus einem nicht Derartigen entsteht? Weil er aus Derartigem entsteht, wäre dieser**

³ Though the formulation is a bit ambiguous, I believe that this is what Mookerjee and Nagasaki also mean in their translation (Mookerjee and Nagasaki 1964: 84): “There is no exception to the rule that similars produce similars and dissimilars produce dissimilars.” Dunne (2004: 335–336) also does not seem to share Steinkellner’s interpretation. Gillon’s translation (2009: 202) leaves the possibility open.

⁴ The emphasis indicates where our interpretations differ.

(Rauch) nämlich ein derartiger. Wenn auch aus nicht Derartigem ein derartiger (Rauch) entstünde, (würde) eine Verschiedenheit der Ursache keine Verschiedenheit der Wirkung veranlassen, weil die Kräfte dieser (derartigen und andersartigen Ursachen) nicht [auf die jeweiligen Wirkungen] eingeschränkt wären. Somit wäre die Vielseitigkeit des Universums ohne Ursache oder alles würde aus allem entstehen. Daher ergeben sich die Verschiedenheit und Nichtverschiedenheit der Wirkungen aus der Verschiedenheit und Nichtverschiedenheit der Ursachen. Infolgedessen entsteht der Rauch nicht aus einer Sache, die von der [als Ursache] gesehenen Erscheinungsform [nämlich des Feuers] verschiedenartig ist, weil (sonst seine) Ursachelosigkeit folgen würde.

My tentative translation:⁵

[Objection:] Because [smoke] has [also] another cause [than fire],⁶ it is not without a cause [when it arises without fire].

[Reply:] No, because it's the same in this case too.⁷ [In this case, one would consider that smoke] arises when fire is present, even when that [other cause] is absent.

Or [given different causes of smoke, which have different natures, if the one, e.g., fire, has the nature of producing smoke, the other, having a different nature, would not have the nature of producing smoke. Thus] how could [smoke] arise either from that [fire that has the nature of producing smoke] or from something else, which does not have the nature of producing it? What itself does not have this nature [of producing smoke] does not produce [it]. Consequently [since that the other thing does not produce smoke, if smoke would arise without fire] it would have no cause.

[Objection:] It is not the case that exactly that [smoke] arises [from the other thing] because something of the same kind [as smoke] arises.

⁵ I thank Karin Preisendanz for making this translation more precise.

⁶ For instance, a termite mound or an anthill.

⁷ The argument is not entirely clear to me. How does it differ from the second argument which begins with *kathaṃ vā*? Perhaps one can understand the first argument epistemologically: If smoke arises also from other cause than fire, then just as one would not be able to infer smoke from fire, one would equally not be able to infer smoke from the other cause, for one knows that even when the other cause is absent, smoke could arise from fire. Thus, what Dharmakīrti would be claiming in the first argument (up to *kathaṃ vā*) is not that smoke would actually be without a cause, but that its cause would not be inferable. The second argument is clearer. Dharmakīrti defines (or in fact reduces) fire to that whose nature is to produce smoke. If smoke arises from non-fire, it would arise from something whose nature is not to produce smoke and thus without a cause. One may mention here that Dharmakīrti recognizes that the determination of causation is not always possible. In a case of a so-called general effect, or effect common to more than one causal complex (*kāryasāmānya*), the determination of the cause may not be possible, for instance in PVS on v. 12, the fact that one speaks may be based on desire or on compassion (see also Franco 2012). Similarly, activity after rest, a special configuration (*saṁsthānaviśeṣa*) and so on (see PV II 10f.) may prove a conscious agent, but not that this agent is an eternal God and not a human being. How are such statements compatible with what is stated here?

[Reply:] Inasmuch as it arises from something of a different kind [than fire], how could it be of the same kind [as smoke]? Indeed, inasmuch as it arises from something of the same kind [as fire], it is/must be⁸ of the same kind (i.e., not the same kind as the cause, but of the same kind as the other effects of fire, namely, smoke; viz., effects of the same kind must arise from causes of the same kind). If [an effect] of the same kind [as smoke] would also arise from [a cause] of a different kind [than fire], a difference in cause would not distinguish [effects] because there would be no restriction to the capacity of its [cause to produce all kinds of effects]. Thus, the diversity of the world would be without a cause, or everything would arise from everything. Therefore, the difference and identity of effects are due to difference and identity of causes. Therefore, smoke does not arise from something which is of a different kind than that thing whose form has been observed [before whenever smoke arose] because [in this case smoke] would be without a cause.

The upshot of Dharmakīrti's argument in this passage is that if causes of different kinds can produce the same effect, we will not be able to infer the cause from the effect. To make such inference, the question whether the effect is similar to the cause is quite irrelevant. The effect does not have to be similar or of the same kind as the cause in order to enable such an inference. The fact that Dharmakīrti does not assume that the effect is similar to the cause in all cases is more than clear in the example of the lotus and the cow dung, which appears a bit later in this context. Dharmakīrti refers to an apparently wide-spread belief that some lotuses do not arise from a lotus seed but from cow dung. It will be difficult to maintain that a lotus and the cow dung are similar or of the same kind, all the more so when Dharmakīrti himself expressly says that they belong to different kinds (*viḥāṭīya*).⁹ If one were to maintain that even cow dung and lotus belong to the same kind, the notion of appertaining to same kind would become arbitrary, tautological, and circular when used for the determination of causation. For if appertaining to same kind means, as Steinkellner argues, the fact that the properties of the effect are due to the cause, then to be of the same kind as something simply means to be produced by that thing. In other words, if we then argue that a cause must be of the same kind as the effect, we would actually argue that the cause must be a cause.

Modes of causation

My second and perhaps more important contention is that what Dharmakīrti states at the beginning of PV I (and in the parallel passages in the *Pramāṇaviniścaya*, *Hetubindu* and *Vādanyāya*) is not meant as complete doctrine of determination of causality. I do not wish

⁸ See the emendations suggested by Steinkellner (2013 I: 55, nn. 30–31).

⁹ See PVSV 22: 22–23: *yad api kiṃcid viḥāṭīyād bhavad dṛṣṭam gomayādeḥ śalūkādi*. Karṇakagomin (PVSVT 106: 13–14) adds the example of *śara* grass (?) arising from a cow horn and a scorpion arising from cow dung: *ādiśabdād gauśṛṅgāc charo gomayād vṛścikaḥ*. Note that the discussion here concerns everyday practice. In Abhidharma causality one could indeed maintain similarity between cause and effect and Dharmakīrti certainly accepts the notion of *samanantarapratyaya*. This is however not relevant to the present context, which deals with inferences in everyday practice.

to deny the importance of these passages, or even their paradigmatic role, but they do not tell us the whole story. Curiously, studies of Dharmakīrti's notion of causation¹⁰ have not raised the question as to how Dharmakīrti puts his own theory into practice. I suggest, therefore, to broaden the scope of the discussion and open up some new perspectives. It is important to note that Dharmakīrti's practice in determining causation is considerably more complex and varied than his statement in PVSV on v. 34 and in the parallel passages in his later works would suggest.

Determining permanent causes

According to the usual interpretation, Dharmakīrti's suggestion for the determination of causation (as based on PVSV on v. 34) consists in identifying a cause in a given situation by isolating it from the environment. Given that all other conditions remain the same, and upon the introduction of a certain new element the effect arises, while when this element is removed, the effect does not arise, one can determine that the one is the cause of the other.¹¹

Thus, according to this statement, one would not be able to determine causal relation, if an entity is permanent or constantly present, for one would be unable to observe whether the effect is absent when the cause is absent. Yet Dharmakīrti admits that the earth, of course along with other factors, is a cause of the sprout. For all practical purposes, the earth is eternal and always present. How could it be determined as a cause of sprouts? Dharmakīrti's reply indicates that presence and absence are indeed not necessary to determine causation in all cases. In the case of earth, it suffices to observe a transformation that brings about changes in the result. For instance, by perfecting the earth with manure, ploughing it and so forth, one observes changes in the quality of the sprout (PV II 25). These changes allow one to determine that the earth is part of the causal complex of the sprout. (So when it comes to God, the reason why he – at least for Dharmakīrti and his opponents it's a he – cannot be determined as a cause is, in the final analysis, not because he is eternal and all-pervasive, but because he is changeless.)

Determining a “permanent” material cause

Similarly, one would hardly expect the process of introducing and removing the cause in the case of a material cause (*upādāna*). In this case, just like the case of the earth and the sprout, it's the transformation in the material cause which allows its identification. This is stated several times and in various forms, for instance in PV II 60–61: Without transformation in the material cause (*upādāna*), there is no transformation in the effect, just as a plate does not change without transformation in the clay. One would not seriously expect the enquirer to remove the clay in order to observe whether the plate continues to exist.

¹⁰ The most important studies are mentioned in Steinkellner 2013 II: 185–186.

¹¹ PVSV 22.3–5: *yeṣām upalambhe tallakṣaṇam anupalabdham yad upalabhyate, tatraikābhāve 'pi nopalabhyate, tat tasya kāryam*. See the translation below.

Determining a “permanent” non-material cause

Dharmakīrti’s notion of causation is often apparent when he denies causal connection in specific cases and we must pay attention to such cases as well. For instance, cognition and body are always present together, at least throughout one’s life. How can one deny that the body is the cause of cognition or that they are causes of each other? In this case too Dharmakīrti relies on the same principle: a transformation of a cause must bring about a transformation in the effect. Thus, if we observe a transformation of the one without a transformation in the other, we can exclude the possibility that the two are causally related. Therefore, when one observes a change in the cognition without a change in the body, one can conclude that the cognition does not produce the body and vice versa. This does not mean that the body is not at all a cause of cognition, but that it is not its so-called material cause.

Temporality

Cause and effect are also connected by a temporal aspect: The effect must last as long as its cause. For instance, if the body were the cause of cognition, the cognition would last as long as the body, and thus there would be no dead body (PV II 51). Further, temporality allows one to distinguish between material/main cause and auxiliary cause (*upakāra*). Fire may change the color of a pot, but the pot and its new color, unlike smoke, continues to exist when the fire ceases (PV II 50). The auxiliary cause is responsible for some specific aspect of the result, not for the result as such.

The influence of the body on cognition is explained by Dharmakīrti in this way, that is, as an auxiliary cause. For instance, the transformation of the body due to poison causes a mental transformation in the form of pain. Dharmakīrti claims that in this case the body is only the object of cognition and the pain results from perceiving the body, not directly from the body (PV II 48). He does not explain though why perceiving someone else’s body does not cause pain in the same manner; one may assume that he would anchor the distinction in the false apprehension of the body as belonging to oneself.

Gradation

Another important aspect to which cause and effect have to conform is the gradual arising. If the cause does not change, the effect cannot arise gradually (or after a time). Thus, lack in gradation allows one to exclude causal relation between breath and body: “How can breath be gradual without its cause be gradual?” (PV II 107) Similarly, if the body is constant throughout one’s life, cognitions cannot arise from it one after the other. They would have to arise all at once. The gradual arising cannot be due to co-producers unless they bring about changes in the cause (e.g., the body, PV II 43). I am not sure how Dharmakīrti would justify this statement in some cases. For instance, light, senses and object, which are co-producers of a cognition, do not bring about changes in the previous cognition.

Locating or locative cause (special case of auxiliary cause)

Dharmakīrti's causal theory uses not only *upakāraka*, but also *ādhāra/āśraya*, which may be translated as locating cause. Dharmakīrti considers this cause from two aspects. If things are momentary, the *ādhāra* causes them to be located in the same place. For instance, the plate causes the berries, which would tend to fall on the floor and disperse in all directions, to be produced in the same place. Similarly, the jug keeps the water from spilling (PV I 144, see also PV II 67–68, 74). If things are not momentary, the *ādhāra* is the cause that prevents their movement. In this manner, Dharmakīrti explains the role of the body in mental phenomena such as amnesia (*smṛtibhramśa*, PV II 76).

Reversibility of process

Reversibility of process also allows one to determine causation. For instance, the Cārvākas argue that changes in the humours can account for the changing capacity of the body to produce cognitions, i.e., when the humours are in strong disequilibrium which causes death, the body is no longer capable of producing cognitions, just like a wick becomes incapable to produce a flame, but Dharmakīrti retorts that when the humours of a dead body regain their equilibrium, just as they do when fever is cured, life would arise again (PV II 54–55). If the Cārvāka argues that the process is not reversible, like the transformation of wood into charcoal, this is not correct because one applies medicine to reverse the transformation of humours.

Increase and decrease

An important aspect for the determination of something as a cause is whether its increase and decrease brings about the corresponding increase and decrease in the result. For instance, lamp and light. However, one observes increase in the properties of cognition such as wisdom, compassion, etc., without increase or decrease in the body. Therefore, the body cannot be the support/cause of cognition (PV II 73). It is impossible that the effect would be destroyed when the cause increases, e.g., when *pitta* increases, fever does not go away (PV II 151). (The anomaly of water and homeopathic medicine would have presented a challenge in this case.)

The Cārvāka claims that when the humours are balanced, the production of sperm increases, which causes the increase of desire. This would be a valid argument, but Dharmakīrti retorts that a sick person may have strong desires and a healthy person none. Further, one may have strong desires even without sperm. Increase in desire arises from increase in pleasure, even when there is no increase in the humours (PV II 151). Further, one observes sick persons with unbalanced humours and strong desires, and also that one ejaculates blood when sperm is exhausted (PV II 153). (I'm afraid I cannot vouch for this observation.)

Another case where increase and decrease are used to reject causal relation is this: Even if the material elements were the cause of consciousness, they cannot be the cause of desire. The causal mode of the elements is not characterized by increase and decrease because one cannot say that one living being is more alive or less alive than another, but some living being have strong desires and some weak. Therefore the cause of desire must be characterized by increase and decrease (PV II 167–169).

Generality and specificity

This is an argument that I have only seen once. The modal correspondence between cause and effect presupposed by Dharmakīrti is so strong that if the cause is general, the effect cannot be specific. Sperm does not explain the nature of desire which is directed towards a specific woman. If the Cārvāka claims that the beauty of the woman also plays a role, this is not correct because one desires also ugly women. The argument looks like an aside, but if we take it seriously, Dharmakīrti claims that if desire is specific towards a single women, so should also be the sperm (PV II 154).

The numerical aspect

If the cause, or causal complex, is one, the effect is one, if the causes are many, the effects are also many: If each atom is capable of producing a cognition, there would be as many cognitions as there are atoms in the body. Similarly, if breath is a product of the atoms of the body singly, there would be as many breaths as atoms (PV II 103–104).

Restricting, hindering and regulating aspects of causality

It is theoretically possible that although each atom of the body is capable of producing a cognition, and thus there would be as many cognitions as atoms, the breath in the body restricts the capacity of atoms to produce only one cognition at the time (PV II 103–104). Dharmakīrti is not explicit about how this could work, but one can assume perhaps that breath, being a part of the causal complex with one atom, cannot be a part of a causal complex with another atom. The possibility is of course rejected by Dharmakīrti. There is no restriction that one breath produces one cognition because one observes that several cognitions arise during one long breath.

Mental properties such as compassion grow out of their own seed (*svabīja*); consequently since *saṃsāra* has no beginning, everyone should have become a Buddha by now. This would indeed be the case if the same did not apply to the opposite negative properties as well. Just as compassion arises from its own seed, so do hatred or aversion (*dveṣa*), and so on. Thus, compassion and aversion obstruct each other's development. It is for this reason that great effort is needed to suppress aversion, etc., with their antidotes (*pratipakṣa*) so that compassion can flow unhindered and reach its utmost degree, as in the case of the Buddha (PV II 131).

Limited and unlimited causal processes

Interesting is Dharmakīrti's distinction between limited and unlimited causal process. The distinction depends on whether or not the causal process has a stable or an unstable result. Certain results continue by themselves, by their own essence (*svarasena pravartate*), e.g., the change of color in burned wood or the increase in mental properties such as compassion. Certain are limited because their causes are limited like jumping and its causes force and effort. Others like boiling water have unstable support. Some are reversible, like heating gold (PV II 124–126).

Presence and absence

Finally, we should not forget our starting point. As long as the cause remains, the result does not cease to exist (PV III 133cd). This is indeed the principle discussed in PVSV 34 and applied to smoke and fire.

Intermediary conclusion

To conclude this section, we see all kinds of correspondences between cause and effect. For lack of a better word, I would like to call them modal correspondences. Existence and inexistence or presence and absence are just one of them; others are transformation, gradation, increase and decrease, reversibility and non-reversibility, generality and specificity, temporal aspects, numerical aspects and so on. I do not pretend to be exhaustive here. However, what we do not see is similarity or appertaining to the same kind as an argument or a consideration in the determination of causal relationship or in its denial.¹² Nowhere is it said, for instance, that the body cannot be the cause of cognition because it is of different kind than the cognition.

If we would like to generalise the underlying principle behind the different modalities, we could say that a change in the cause must bring about a change in the effect. PV II 111 puts it explicitly: if A is the cause of B, B changes when A changes. Or more literally: “What does not change because of the change of something else is not the result of that thing” (*na hi tat tasya kāryam yad yasya bhedaṅ na bhidyate*).

The problem of induction

I come now to my third contention, which concerns the problem of induction. Steinkellner suggested two new interpretations of Dharmakīrti’s words, which he sees as complementary rather than contradictory (2013 II: 210). The core of the discussion is Dharmakīrti’s famous and enigmatic statement in PVSV 22.3–5 (German transl. in Steinkellner 2013 I: 54): *yeṣāṃ upalambhe tallakṣaṇam anupalabdham yad upalabhyate, tatraikābhāve ’pi nopalabhyate, tat tasya kāryam* “When a perceptible thing unperceived [before] is perceived when several [other things] are perceived, and is not perceived when even one among these [things] is absent, it is the effect of that [one of these things]/of these [several things].”¹³

No matter whether one understands *tat* to refer to *tatra* or to *eka*, the straightforward reading of this statement does not single out one thing such as fire as the cause of smoke, and this in contradistinction to the verse on which this statement comments: *kāryam dhūmo hutabhujah*. “Smoke is the result of fire” (as well as to later formulations where the plural is changed to singular). Rather, it is clear that Dharmakīrti focuses here on a causal complex. Perhaps for this reason, Steinkellner suggests that fire in the verse should be taken for the

¹² Again, this is not to deny Dharmakīrti’s acceptance of *samanantrapratyaya* and Abhidharma causality. The discussion above deals with inference on the level of everyday practice.

¹³ Steinkellner’s translation opts for the first alternative, as do Mookerjee and Nagasaki (1964: 82); Gillon (2009: 201) opts for the second: “their effect.” Grammatically *eka* is subordinate and should not be referred to by *tat*, but we know that Dharmakīrti does not respect this rule (e.g., *Nyāyabindu* 1.1). For the time being, I would like to leave this issue open.

entire causal complex, namely, fire (i.e., “heat atoms”), wood, air and so on (2013 II: 189, 199). He further argues that each of the causes referred to by *yeṣām*, *tatra*, etc., is not a single thing, but a causal complex. In other words, Dharmakīrti’s statement means that several causal complexes are perceived and then any one of them may be absent and not be perceived. I am not sure what we would gain by this hypothesis; I am also not sure that we don’t have a terminological problem here. Usually according to Dharmakīrti one causal complex, being complete and unhindered, is alone capable to produce an effect (see also “the numerical aspect” above). If several complexes cooperate in producing something, this means, according to Dharmakīrti, that they form one larger and encompassing causal complex. Be that as it may, Steinkellner’s interpretation goes clearly against the straightforward understanding of the verse and is contradicted by the commentaries. Nevertheless, it could be accepted if it would have some advantage, for instance, in making Dharmakīrti’s statements clearer or more persuasive. However, the contrary is the case. If accepted, it would make the determination of the causal relation practically impossible. How could one ascertain that even one of the causal complexes is absent? Steinkellner himself says (2013 II: 189) that every causal complex is “in principle quantitatively infinite” (“grundsätzlich quantitativ unendlich”). Thus, one would be able to ascertain at most that a causal complex is incomplete; not that it is absent.¹⁴ It is of course true that in the final analysis causes for Dharmakīrti are not individual things, but complexes, but going down to this atomic level of analysis when considering inferences of everyday practice such as from smoke to fire is counter-productive, for it would mean that for practical purposes in everyday practice causation could never be determined.

Whatever the case may be, Steinkellner considers this to be the first step of a proof, which has an inductive character (2013 II: 201). The second step, which consists in a *prasaṅga* (34cd+*Vṛtti*), is supposed to bestow the necessity and general validity (2013 II: 201: “Notwendigkeit und allgemeiner Gültigkeit verleihen” with references to Dunne 2004: 174f. and Lasic 2003: 186–191) upon the cognition gained from the first step. This may be true, but one should note the price, and a very high price it is. Basically the *prasaṅga* argument makes non-fire into fire. For fire is now not what looks like fire, heats like fire and burns like fire, but whatever produces smoke. If it is an anthill, then an anthill is fire,¹⁵ if it arises from rubbing together two pieces of wood (Pvin II 85.9) then the invisible heat atoms are fire, and if it is water then water is fire. Thus, the understanding and definition of fire becomes arbitrary, and Dharmakīrti more or less admits it. Furthermore, Dharmakīrti

¹⁴ Consequently under this interpretation absence (*abhāva*) of causal complex and its incompleteness (*vaikalya*) become, at least in practice, conflated.

¹⁵ See PV I, v. 36. Dharmakīrti probably refers to a popular belief that anthills or termite mounds contain fire and emit smoke. As termite mounds are humid, one can imagine that vapors, that look like smoke, rise out of them when they are heated by the sun. Dharmakīrti may also be alluding to the fire ritual, where an anthill or termite mound symbolizes the head of the sacrifice. On the role of anthills or termite mounds in the “establishing of fire” (*agnyādheya*), see Krick 1982: 139ff., esp. 141–142 and König 1984: 170ff.; the belief that fire, as well as the god of fire (Agni), and the sun reside in termite mounds appears already in Vedic literature, cf. König 1984: 171. The *Majjhimanikāya* 23 (*Valmīkisutta*) mentions an anthill that “smokes by night and blazes up by day” (Horner 2004 I: 183, repeated with explanation p. 185; I owe this reference to Antonio Rigopoulos): *ayaṃ vammiko rattiṃ dhūpāyati divā pajjalati*. However, this may refer to an unusual appearance and normally it would be the other way round.

admits that certain effects may arise from different causes; would he admit that the lotus seed and the cow dung have the same nature inasmuch as they produce lotuses? His suggestion that the nature of lotuses produced by seeds is different from the nature of lotuses produced by cow dung (PVSV 23.23–24) sounds like an axiomatic assumption rather than one based on observation. And would scorpions and lotuses have the same nature inasmuch as they are both produced by cow dungs or would one have to distinguish between different types of cow dung? Put differently, Dharmakīrti's *prasaṅga* makes the inference from smoke to fire certain, but arbitrary and tautological. If we call fire whatever smoke arises from, then the inference of fire from smoke is only an inference that smoke has a cause. We are not actually inferring fire from smoke, but only that smoke has a cause, which we call fire.

Steinkellner considers Dharmakīrti's proof to be a stroke of genius (2013 II: 204: "... nichts weniger als für genial") and that Dharmakīrti may have solved or 'avoided' the problem of induction "at least for his own purposes." It goes without saying that Dharmakīrti did neither avoid nor solve the problem of induction. It would be naïve to expect him to solve what is clearly an insoluble problem. Moreover, the basis of Dharmakīrti's proof is not particularly original. What he actually does is to revive an old Abhidharma idea which appears in the AKBh. Furthermore, the way Vasubandhu mentions the determination of causation as a matter of course indicates that he too is not its original author, but relies on a well-known Abhidharma definition:

AKBh 461:8–9: *tatredam anumānam sati kāraṇe kāraṇāntrasyābhāve kāryasyābhāvo dṛṣṭo bhāve ca punar bhāvas, tadyathāṅkurasya.*

There is an inference in relation to these [senses]: When cause(s are) present and another cause is absent, the effect is observed not to arise, and on the other hand when [that other cause] is present, [the effect] arises, for instance [the seed] for the sprout.¹⁶

However, this does not mean that Dharmakīrti is simply repeating Vasubandhu. Certainly the philosophical problems he faced in the seventh century were different from those of Vasubandhu in the fourth. Rather, we have to appreciate Dharmakīrti's advance upon the doctrine of his predecessors (especially Kumāriḥ and Īśvarasena), who, like many philosophers in the Western tradition up to the 21st century, seem to have regarded the inductive process as merely or basically cumulative. While sporadic accumulation of facts is certainly used in everyday practice to form general judgements, Dharmakīrti's (and in that respect also Vasubandhu's) method depicts not only what we actually often do in everyday practice, but resembles the one used (of course with much more elaboration and refinement) in scientific determination of causality, for instance, by pharmaceutical companies to determine the causes of pathologies, the effect(s) of particular substances,

¹⁶ See also AKV 1190.22–24 thereon: *sati kāraṇe kṣetrodakādike, kāraṇāntarasya bījalakṣaṇasyābhāve kāryasyāṅkurasyaābhāvo dṛṣṭaḥ. bhāve ca tasya bījasya punarbhavo* (read *punar bhāvo*; it does not make sense to say that the sprout arises again) *āṅkurasya dṛṣṭaḥ*. "When causes such as the field, water and so on are present [and] another cause such as the seed is absent, the absence of the effect, namely the sprout, is observed, and on the other hand when this seed is present the presence of the sprout is observed."

and so on.¹⁷ Dharmakīrti's advance over the older Abhidharmic formulation can be seen not only in his reformulation in PVSV on v. 34 and the repeated insistence that mere non-observation is an unreliable basis for inference, but also in the supplements of this procedure by multiple other aspects such as increase and decrease, gradation, and so on, as indicated above. Although rudimentary and unsystematic in its formulation, the various aspects of causation that Dharmakīrti uses in practice contain in a nutshell the procedure we still employ today: experiment, strength of association, consistency, specificity, temporality, gradation and coherence. Interestingly, we should also note what it does not contain: plausibility and probability. To repeat, Dharmakīrti neither circumvented the problem of induction, nor did he solve it. Yet, in his perception that inductive knowledge is not merely an accumulation of observations, he comes as close to dealing with the problem of induction as we are today.

What is it all about?

Finally, my fourth and last contention: What is it all about? In the second part of his study, Steinkellner suggests that Dharmakīrti's statements (in PVSV 22.2–4) can be understood as having an entirely different purpose (Zielrichtung, 2013 II: 205). They are not at all aiming at explaining how to determine a causal connection, but what should be understood under the words "cause" and "effect." In other words, what Dharmakīrti is talking about are the conditions for the usage of the words. Steinkellner calls this "the linguistic turn" (2013 II: 210 "linguistische Wende") and justifies this move by the statement the objects one investigates are not real entities, but only conceptual constructions of something as "cause" and as "effect." Under certain conditions one can conceptualize something as a "cause" or as an "effect."

To be sure, the term "linguistic turn" has more meanings than one. The article about Relativism in the SEP (*Stanford Encyclopedia of Philosophy*) considers the linguistic turn to be characterized by "questions about properties and concepts being replaced by questions about words and linguistic usage." For example, some philosophers spoke of the role of language or, more generally, "systems of symbols in structuring our experience, thought, or even reality itself." In a lengthy introduction to a volume entitled *The Linguistic Turn* (1967), Rorty characterized the linguistic turn as the opinion that "a 'philosophical problem' was a product of the unconscious adoption of a set of assumptions built into the vocabulary in which the problem was stated – assumptions which were to be questioned before the problem itself was taken seriously." (SEP s.v. Richard Rorty, see Ramberg 2009). In this sense, Dharmakīrti should not be considered to introduce a linguistic turn into the

¹⁷ The example of pathologies was suggested to me by John Taber in a personal conversation and I would like to take this opportunity to express my gratitude to him for many stimulating conversations. However, Taber has his own opinion on the problem of induction (or indeed the lack thereof) in Indian philosophy and is not to be held responsible for anything suggested here. For the determination of causation in medical sciences see for instance the often quoted Hill 1965. Among the criteria specified, Hill mentions the strength of the association, its consistency, specificity, temporality, biological gradient (which corresponds to "gradation" in Dharmakīrti's terminology), plausibility (as far as I can see, not used, at least not explicitly, by Dharmakīrti or anyone else in the Indian tradition), coherence, experiment and analogy.

problem of causation. At least I cannot see him distinguishing concepts from words and linguistic usage or that the assumption built into a vocabulary would have to be articulated and questioned before the problem could be solved. I also fail to see that Dharmakīrti would fit into the linguistic turn of the Vienna Circle, which considers representation as the proper subject matter of philosophy (Vienna Circle, SEP).

The key to our question lies in Dharmakīrti's purpose. What does he aim to achieve with his new theory of reason in PVSV? As far as I can see, he neither aims at "saving the phenomena," nor was he concerned with establishing any scientific theory (in sense of natural sciences), nor was he a pure logician concerned with the logical problems *per se*, nor did he aim at establishing the validity of everyday practice, which involves inferences from smokes to fires. I think that what really troubled him were inferences on doctrinal matters. Such inferences appear in the beginning of the PVSV, and in this sense we cannot say that he keeps his cards close to the chest. Already in v. 11 he addresses the Mīmāṃsā inference: The Buddha had desires because he had a body, like a common man. And immediately after that (v. 12) we have an extensive discussion of a somewhat similar inference: The Buddha was not free from desires (*vītarāga*) because he spoke, like a common man. Another inference, perhaps put forward by a Naiyāyika, appears in v. 18: The living body is not without a soul because otherwise it would not have breath and so forth. Such inferences were unacceptable to the Buddhists, and yet they were valid in the sense of complying with the *trairūpya* theory. I suggest that it is probably in response to such inferences that Dharmakīrti developed his theory of three kinds of reasons, and the primary aim of his theory was to show why these and similar inferences were not valid.

Dharmakīrti's dealing of the *vyavahāra* inference from smoke to fire may be seen therefore just a by-product for his doctrinal concerns. For in classical India, no theory of inference would get off the ground without dealing with this paradigmatic inference. However, it is clear that his interest lies elsewhere. As Lasic (2003: 190) has already noticed, "[h]e [Dharmakīrti] does not seem to have aimed [in PVSV 22.2–4, etc.] at a detailed discussion of the procedure of establishing the causal dependence in an individual case." On the other hand, he was very much interested in the pragmatic situation of what should count as a valid proof in the inter-religious debate. His interest in causation was thus not directed at causation in natural phenomena, but in causal connection between body and consciousness, between desires, compassion and speech, between body and soul. And in dealing with these topics, he was as much interested in the possibility of denying a causal relation (notably between body and cognition) as in establishing one.

References and abbreviations

- AKBh** Abhidharmakośabhāṣya of Vasubandhu, ed. P. Pradhan. Patna 1975.
AKV Abhidharmakośavyākhyā of Yaśomitra, ed. D. Sastri. Patna ²1977.
Dunne 2004 John Dunne, *Foundations of Dharmakīrti's Philosophy*. Boston 2004.
Franco 2012 Eli Franco, Once Again on the Desires of the Buddha. In: *Devadattīyam – Johannes Bronkhorst Felicitation Volume*, ed. François Voegeli et al. Bern 2012, 229–245.

- Gillon 2009** Brendan Gillon, The Role of Knowledge of Causation in Dharmakīrti's Theory of Inference. In: *Buddhist Philosophy. Essential Readings*, ed. Williams Edglass et al. Oxford/New York 2009, 197–204.
- Hill 1965** Austin Bradford Hill, The Environment and Disease: Association or Causation? *Proceedings of the Royal Society of Medicine* 58 (1965) 295–300. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1898525/>, last visited 15-05-2016.
- Horner 2004** I.B. Horner, *Middle Length Sayings*. Delhi 2004.
- König 1984** Ditte König, *Das Tor zur Unterwelt. Mythologie und Kult des Termitenhügels in der schriftlichen und mündlichen Tradition Indiens*. Wiesbaden 1984.
- Krick 1982** Hertha Krick, *Das Ritual der Feuerbegründung*. Wien 1982.
- Lasic 2003** Horst Lasic, On the Utilisation of Causality as a Basis for Inference. Dharmakīrti's Statements and Their Interpretations. *Journal of Indian Philosophy* 31 (2003) 185–197.
- Mookerjee and Nagasaki 1964** Satkari Mookerjee and Hujun Nagasaki, *The Pramāṇavārttikam of Dharmakīrti*. Patna 1964.
- PV** Pramāṇavārttika of Dharmakīrti, ed. Y. Miyasaka. *Acta Indologica* 2 (1971/72) 1–206.
- PVin** *Dharmakīrti's Pramāṇaviniścaya*, Chapters 1 and 2, ed. E. Steinkellner. Beijing/Vienna 2007.
- PVSV** *The Pramāṇavārttikam of Dharmakīrti*, ed. R. Gnoli. Roma 1960.
- PVSVṬ** *Pramāṇavārttikasvavṛttiṭīkā of Karṇakagomin*, ed. Rahula Sāṅkṛityāyana. Ilāhābād 1943.
- Ramberg 2009** Bjørn Ramberg, Richard Rorty. In: *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta. Spring 2009 Edition. <http://plato.stanford.edu/archives/spr2009/entries/rorty/>, last visited 15-05-2016.
- Steinkellner 2013** Ernst Steinkellner, *Dharmakīrtis frühe Logik: Annotierte Übersetzung der logischen Teile von Pramāṇavārttika I mit der Vṛtti. I: Introduction, Übersetzung, Analyse. II: Introduction, Anmerkungen, Anhänge etc.* Tokyo 2013.
- Taber 2003** John Taber, Dharmakīrti Against Physicalism. *Journal of Indian Philosophy* 31 (2003) 479–502.
- Watanabe 2004** Toshikazu Watanabe, On the Problem of the Determination of Causality: *bādhakapramāṇa* and *bheda*. *Hikaku Ronrigaku Kenkyū* 2 (2004) 57–61.