EMPIRICAL FALSIFIABILITY AND THE FREQUENCE OF DARŚANA RELEVANCE IN THE SIXTH CENTURY BUDDHIST LOGIC OF ŚĀNKARASVĀMIN

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First, I wish to examine the degree of empirical falsification regarding those references which are, and can be, substitutions for second-order, content-neutral metalogical cliches. The textual object of my analysis is the sixth century Buddhist manual of inference (anumāna) the Nyāyapraveša («Introduction to Logical Methods») of Śaṇkarasvāmin (¹). Second, I wish to consider the relevance and the role of possible mutually incompatible philosophical presuppositions derived from the different daršana systems in Indian philosophy to which the various Indian logicians appealed when generating possible substitutions denoted by metalogical cliches (=MCs).

Elsewhere (2) I have demonstrated that in this Buddhist logic

- (1) Sanskrit editions of the Nyayapraveśa (hereafter cited as NP) may be found in: Dhruva, A.B., The Nyāyapraveśa, Part I, Gaekwad's Oriental Series, Baroda, 1930; Ui, H. Bukkyo Ronrigaku (Buddhist Logic), Tokyo, 1944; Mironov, N.D., «Nyāyapraveśa, I, Sanskrit Text, edited and reconstructed,» in T'oung Pao, Leiden, 1931, pp. 1-24; Tachikawa, M., «A Sixth-Century Manual of Indian Logic,» in Journal of Indian Philosophy, I (1971) p. 111-145, Toronto. A Chinese translation of this text may be found in the Taishō Shinsu Daizōkyō, Buddhist Triptaka, vol. 32, No. 1630, 11-13. The Tibetan translation has been edited by V. Bhattacharya in The Nyāyapraveśa, Part II, Gaekwad's Oriental Series, Baroda, 1927, and in the Tibetan Tripitaka, Peking edition, Reprint, edited by D. T. Suzuki, Tokyo, 1962, No. 5706, 130, 74-76. I refer to the numbers subdividing Tachikawa's edition (with translation) for an easy reference to the text and bibliography (p. 119) on the controversy concerning whether Dignāga or Śankarasvāmin (who is listed as the author in the seventh century Chinese translation of Hsüan Tsang) is the real author of the NP.
- (F) See my article «Content-Neutral Metalogical Cliches and Their Restricted Substitution in Sixth Century Buddhist Logic, «fthcm in Notre Dame Journal of Formal Logic. A few scholars have mentioned in passing the function of these cliches, but no one, to my knowledge, has analyzed their frequency, the implicit and explicit criteria for their substitution nor the degree of falsifiability by contemporary standards (cf. notes 4 and 6 below).

of the sixth century (and in most, but not all, of pre-twelfth century Indian logic in general) there are special terms which have attained the status of technical terms through the long period of Indian logical development. These second-order cliches or «proto-variables» have enabled the Indian logicians to evaluate and recognize the legitimacy and the illegitimacy of certain public inference schemas (pararthanumana). I have remarked that these MCs are somewhat (if not the exact functional equivalent) akin to the function of modern variables. However, I do not hold that the Indian logicians have used explicit variables as did Aristotle or the Stoics, or as modern logicians use them; although the Indian logicians did use these content-neutral second-order metalogical terms, this is not to say that these terms are either the exact functional equivalence of variables today. It is only to say that within this proto-metalogical terminology, there were sets of words and metalanguage rules each of which had a clear topic-free meaning, and which clearly expressed the assumed second-order metalogical relationships among the very possible linguistic components of the inference schema (parārthānumāṇa). Each word then, no matter what its content or referent, designated metalogical relationships and implicit assumptions. They functioned as instruments by which these metalogical relationships were recognized and evaluated. These metalogical markers were associated with explicit and implicit rules, plus explicit conditions, which when satisfied, provided one with an explicit set of criteria with which to evaluate the specific mistakes, if any, within an inference schema. In brief, there are three sources from which rules for the evaluation of inference schemas can be derived: 1) an explicit rule such as the three forms of the justification (trirūpahetu); 2) the fallaces (ābhāsas) which refer (in part) to different assumptions denoted by these content-neutral second-order terms which express licit and illicit metalogical relationships between components of the inference schema; 3) Last are the differing metaphysical assumptions between the different daršanas which give rise to inference schemas that were deemed incompatible, not wholly on grounds of empirical or logical evidence, but on grounds of the incompatibility of certain assumptions about the world, i.e. certain metaphysical nonempirical assumptions. For example in the latter case, we may have a Vaišeșika and a Buddhist debating about the ontological status of the self (ātman). The former would hold that it is eternal; the latter would hold that it is impermanent and thus non-eternal. The acceptability of an inference schema which assumed one of these two possible positions about the nature of the self, would be incompatible between different disputants, not by appeal to empirical evidence, but by reference to logically prior metaphysical assumptions. The instruments by which these relationships and assumptions are pointed out are second-order content-neutral MCs. Thus the evaluations and acceptability of a given inference will be judged not only on formalistic grounds but on empirical or non-empirical metaphysical grounds as well.

A contemporary logician should remember that what makes this period in Indian logical development interesting in the global history of logic (be it of East or India, China or the «West»), is the development of a proto-formal logic in which the formalism, which we now have come to expect, is somewhat anticipated in the earlier gradual Indian developments. Of course, here I am speaking of sixth century logic, which is a fairly early period in Indian logic; it is a period which exemplifies a transitional mid-point in such a formalistic development. With this background and with these assumptions I wish to consider the frequency by which these propositions denoted by the MCs are falsifiable by general contemporary expectations and the degree to which these metalogical cliches denote implicit propositions which are relevant to and which implicitly appeal to daršana metaphysics and/or public empirical reality.

Also a word is in order to Indologists-cum-philosophers. Those scholars ignorant of the later analytical developments of the pramāṇa vāda tradition and therefor familiar only with or who have restricted themselves to the non-pramāṇa vāda, prethird century A. D. developments (such as found in the Bhagavad-Gitā or the Upaṇishads) have sometimes very fuzzily talked about the degree to which the Indian logicians' description of reality is incompatible with the modern empirical des-

criptions. My analysis will show (in quantitative terms) the degree to which the assumptions which are formulated in propositions, denoted by these MCs, are, in fact, falsifiable and the degree to which they depend upon and are thus relevant to the many non-empirical metaphysical assumptions of the daršanas. In other words, we will see in quantitive terms to what degree both the modern man and the sixth century Indian logicians are talking about the same world but are describing it quite differently. Also, I think it is true that some Indologists simply do not wish to investigate the degree to which there is an incompatibility between ancient views and contemporary views; I hold that these comparisons are both philosophically interesting and legitimate. The burden of proof lies on those who do not share this assumption. With this investigation we may generate some clear quantitative information about this epistemological disparity, and we may thus be able to begin to focus upon the reasons for this general philosophical diversity and disagreement. Intra-cultural and crosscultural comparative epistemology remains a curiously empty area of Indology.

Implicit in this study is an assumption that the disagreements this study may make explicit is a further justification for extensive studies in the history of logic and the history of the history of logic, be it of «East or West». The possible answers to the divergent philosophical views exemplified in this text will justify the further investigation of differing historical and cultural views about the same multi-valent «epistemological» world. The extreme anti-historical position of some modern Western analysts has, of course, been modified and reduced over the last few years. However, there still remains a hard core of those who would suggest that the study of the history of philosophy is slightly antiquated. Obviously, I do not hold this assumption; I wish to note that the disparity we will see here in this study will yield support for the philosopher's continued and detailed interest in the history of culturally diverse and methodologically different philosophical traditions. In other words, this point where traditional Indology meets contemporary philosophy does not necessitate special pleading for

the Indian systems but rather, necessitates that only standard philosophical methodology be applied to the Indian context. Indologists have only to fear ignorance and inaccuracy, as do all scholars; Indian philosophy will take care of itself; it needs no special dispensations or special pleading.

A Model Nyāya Inference Schema

A. Representative Example (from the Nyāyapraveša)

Thesis: «SOUND (IS) IMPERMANENT*

(Paksa)1 śabdo 'nityam*

Justification: BECAUSE (IT POSSESSES THE PROPERTY² OF) CREATEDNESS.

(hetu)¹ Kṛtakatvāt i.e., the property (hetu²) is the dharma; the property-locus (pakṣa²) is in the entity «sound»; the whole «because ...createdness» is the sādhanam.

Exemplification: WHATEVER (IS A) CREATED (THING),

THAT (IS) WELL KNOWN (AS AN) IM-

PERMANENT (THING).

(dṛṣṭānta) yat kṛtakam tad anityam dṛṣṭam.

Similar Example: ... AS (IN THE) CASE OF A POT, ETC.

(sapaksa) yathā ghata ādis

Dissimilar Example: ... AS (NOT IN THE) CASE OF

SPACE, ETC.

(vipakşa) na yathā ākāśam

Paksa¹ and hetu¹ with superscripts refer to a *proposition* in paksa¹ and the *ascription* «because (it...) createdness» in hetu¹; paksa² and hetu² refer respectively, to the locus or the property-possessor (dharmin), here «sound» (śabda) and to the proper-

^(*) sādhya, «property-to-be-inferred»

ty (dharma) of createdness (kṛtakatva) alone. That is, the superscript¹ refers to grammatical or syntactic categories, e.g., propositions or ascriptions; superscript² refers to properties or the locus of such dharmas. These distinctions have been equivocated upon in many nyāya texts (3).

We should note two features of this example (4). First, there is the crucial explicit metalogical rule, the Trirupahetu which authorizes one, given the satisfaction of this rule, to conclude that the inference schema is a legitimate one (not a «valid» one). That is, if a schema conforms to this explicit metalogical rule, i.e., trirupahetu, the «Three Forms of the Justification», this constitutes (at least) a necessary condition for its acceptance. This rule and others devised for similar metalogical purposes in other texts were the subject of the ongoing controversies in the long history of nyāya; this particular rule was superceeded by other more precise criteria and was strongly criticized by other darśanas (5). This Trirūpahetu role states that the justification-property (hetu² dharma) must be: A) concomitantly present with the thesis-property (pakṣadharmatvam), B) present in the similar example (sapakse sattvam), and C) absent in the dissimilar example (vipakse cāsattvam).

Secondly, one should notice that such terms as pakṣa¹ («thesis»), hetu¹ («justification»), dṛṣṭānta («exemplifaction»), sapakṣa («similar example»), vipakṣa («dissimilar example»),

- (3) I have noted the above equivocations in my «Remarks on Early Buddhist Proto-Formalism (logic) and Mr. Tachikawa's translation of the Nyāyapraveśa,» in The Journal of Indian Philosophy, Vol. 3/4, Dec. 1975, 383-398.
- (4) Likewise and obviously in (so-called) «Aristotelian» or «Classical» (post-Renaissance) logic, but not the true logic of Aristotle, terms such as «middle, major» term(s) were also designated by the somewhat confusing names of «subject term, predicate term» which were derived from misapplied grammatical/syntatic presuppositions.
- (5) See e.g., the famous Buddhist Nyāyabindu, in Vinītadeva's Nyāyabindhutīkā, edited and translated by M. Gangopadhyaya, Calcutta, 1971, p. 122ff; for a Jaina refutation see e.g., Vadi Devasuri's Pramāna-Naya-Tattvālokālamkāra, translated by H. S. Bhattacarya, Bombay, 1967, p. 193ff. My reviews of both these texts may found in Philosophy East and West, Vol. 27, no. 1, January, 1977, 115-117, for the former, and Vol. 26, no. 4, October, 1976, 479-480, for the latter.

sādhya («Property-to-be-inferred»), pakṣa 2 and dharma-dharmin, sādhana (hetu 1 and 2) («property» and «property-locus») are some examples of second-order MCs.

B. One possible formalized translation of the Parārthānumāṇa follows:

$$(x), (\exists y) \begin{array}{c} \text{Hetu-} & \text{B} \\ \text{Data} & \supset \\ (x), (\exists y) \begin{array}{c} \text{Drṣṭānta-Warrant} \ . \ (Sy)) \\ (((Sx \supset Ix) \ . \end{array} \\ & ((Iy) \ . \begin{array}{c} \text{Assumption} \\ (y\mathscr{E}x))) \end{array}$$

Where:

Properties: $S = _{df} Krtakatva (createdness)$

(Arguments $I =_{df}$ anityam (impermanence) the preferred (dharma) of the thesis (paksa¹)

Variables: $x =_{df}$ the class of all conditioned things

 $\exists x =_{df} restricted variable (matrix) denoted by the term «sábda,» the locus of property-to-be-demonstrated (sādhya)$

Functors: $=_{df}$ (conjunction, «and»)

 $B =_{df}$ the Sanskrit Ablative case interpreted as interchangeable with «if ... then» (6)

 $\mathscr{E} =_{df}$ Class Inclusion, as in $(y\mathscr{E}x)$: = y is a member of the class of x.

The partial similarity (but not isomorphism) of this formalized translation to the above Indian inference schema suggests a great many controversial metalogical issues for discussion, however, I shall confine myself here to that of the metalogical

⁽⁶⁾ I have noted some of the incompatibilities of this interpretation with this example such as non-truth functionality and the non-reversability of «If p then q», and «q because of p» in the parārthānumāna, in my article «Methodological Incompatibilities in the Formal Description of Buddhist Logic,» The Notre Dame Journal of Formal Logic, Vol. 18, no. 2, April, 1977, 221-231.

presuppositions concerning the use of Mcs and the rules for their substitution.

V. Sources and Implicit Rules for MCs

When we consider the terminology and relationships of the explicit necessary conditions in the trirupahetu, it is clear that there is a form of evaluation and restricted substitution occurring here by means of these Mcs, e.g., sādhya («inferendum») dharma-dharmin (property, property-possessor) relationships, sapakşa (similar example), hetu² (justifier), etc. For example, note that the words «sādhya» and «hetu²» (justification-property) refer to properties (dharmas) which stand in a postulated relation of concomitance; if the properties (dharmas)in each (i.e., the sādhya and hetu2) are known to be present together in the similar example (sapaksa), then the second aspect of the trirupa rule is satisfied. It is most important to note that it is satisfied without reference to or appeal to the specific content of the properties (dharmas)of either the sādhya or hetu2. Thus when such criteria have been met, such as in the trirupa hetu, at least the necessary formalistic conditions for the conclusion would have been established. Thus we see here an explicit role of metalogical evaluation.

In the section concerning fallacies (ābhāsa) the formulation and evaluation of inference-schemas, the text offers *implicit* criteria which reject certain possible forms of the schema which violate non-formal prerequisities, e.g., non-contradiction of one's words (svavaccana, 3.1.5., p. 141) and conformity (i.e. (non-)contradiction (viruddha)) to the presupposition of one's own darśana (āgamaviruddha, 3.1.3., p. 141). Also, in the fallacies of the justification (hetu¹) there is the *implicit* presupposition that both parties of the debate examining the thesis (pakṣa¹) must agree that the justification property (hetu¹) the dharma-property, is acceptable to both parties (3.2.1.1., p. 141). The discussion attempting to reconcile such a disagreement is generally called «tarka.» (²)

⁽⁷⁾ cf. My article «Tarka (Inductive Reasoning), As Pramāna, and the

The justification (hetu2) as ascription-member along with the pakṣa¹ and dṛṣṭānta justification property (hetu¹ dharma) is also the inferendum sādhya = dharma (property) of the thesis (pakṣa², pratijñā). This specific property or quality of an epistemological object (viśesa) is asserted to be continually (past, present and future) concomitant with the specific dharma (property) of the hetu1 (justifier) as exemplified in the general drstanta-warrant, e.g., «where there is a created x there is an impermanent y, as in a p,» etc. In this context, if there is a metaphysical or epistemological assumption which is incompatible with the presupposition of either of the debators, or contradicts either the thesis (pakṣa¹) or the justification member (hetu²) then the inference schema may be ruled as illegitimate and (8) rejected (3.2.1.1., p. 141). Such metalogical designations are prerequisities for discussing the general truth value of the thesis such that both parties agree upon the metaphysical acceptability of such metalogical relationships; this is accomplished by means of such MCs as the dharma-dharmin, pakṣa¹pratijñā, etc., relationships. For example, the latter relations explicitly describe the property («sound»), and the properties, «impermanent» and «being a product,» in certain particular second-order explicit relationships, the agreement of which depends on the metaphysical presuppositions assumed by the debators (vādi, prativādi). When such assumptions are agreed upon or are debated upon, the second-order function of the MCs becomes operative in the evaluation of the inference schema itself, i.e., that it well known (drsta, prasiddha, «established») that the pakṣa² «sound» (śabda) is, by definition, eternal (nityam). The two above terms are contrasted with the paksa 1 and 2 in relationships which refer solely to the inherent non-metaphysical relationships within the inference schema; and as such they describe the relevant metalogical schematic

Justification of Inductive Arguments,» read at the 30th International Congress of Orientalists, Mexico City, August, 1976.

Also see Advanced Studies in Indian Logic and Mataphysics, by R.S. Sanghvi, Indian Studies: Past and Present, Calcutta, 1961, p. 82ff.

(8) Clearly the concept of deductive validity is wholly unappropriate here; thus I would suggest, in passing, that the Indologists *stop* using the term; *arguments* may be valid, or invalid, propositions cannot.

positions and formal relationships without recourse to external semantic or material relationships. «Well-known» (drsta) and «established» (prasiddha) do refer to external epistemological evaluations, i.e. of being well known or established by the speech community in the debate (vāda).

Other relevant non-formal restricted substitutions may also be found in the fallacies of the thesis (paksa, p. 122, 3.1.). For example, 1) a contradicted thesis where a Vaisesaka, who holds by his philosophical position that sound (sábda) is impermanent, and would thus posit that sound is permanent (3.1.3), and 2) where is Samkhyist disputing with a Buddhist, who holds that there is no unique ontological entity called a self (an-ātman), thus posits the thesis that the self is sentient, or metalogically, that the locus of the qualifier (viśesya) is non-existent. That is, the self (atman), the locus (viśesya) of the self is incorrectly qualified (viśesa) as being sentient (3.1.7). Thus these theses would be ruled illegitimate (i.e., fallacious-ābhāsa) because the claims made about the world, which are denoted by such proto-variable terms as «thesis,» «qualifier,» etc., are rejected by at least one disputant; they are rejected not because of public counter-examples or by rigorous empirical falsification, but because of prior but incompatible (here) metaphysical presuppositions. Thus, in discussing these MCs, the terms «pakṣa» (thesis) and «viśeṣya» (qualifier) do function somewhat as variables function only in that they allow one to evaluate the illegitimacy of the inference schemas by refernce to the special non-formal relationships denoted by these special MC terms and for which explicit and implicit rules apply.

Other more or less formalistic but implicit rules for evaluation are made by means of the fallacies, e.g., «contradicted marks» (Viruddah hetu, 3.2.3.1., p. 142) whereby metalogical relationships are denoted. A «mark,» (*) (hetu¹) that proves the opposite of the sādhya (inferendum), i.e., the permanence of sound (śabda) is «sound is permanent because it is produced (kṛtakatvāt).» That is, whatever is an effect of casuality (i.e.,

⁽⁹⁾ Tachikawa (Ibid.) uses the term «mark» as a translation substitute for «hetu1» whuch I translate as «justification»; «mark» has been the usual translation for «linga» but which is *not* used in the NP.

produced, kṛtakatva) because of human effort (prayatnānan-tartyakatvāt) is subject to change; this is incompatible with the Mīmāmsa presupposition that «sound» (śaba) is eternal and non-produced (3.2.3.1., p. 142). If one who posits the above schema wishes to demonstrate the permanence of śabda, his hetu² («produced») constitutes evidence that sound is impermanent; thus because of the non-formal fallacy in his justification, hetu², he fails to make hi scase uncontroversally. Note that these relations are named and evaluated by means of the MC hetu¹ and ² and sādhya; with them metalogical relationships are designated and thus fallacies can be discussed.

The whole section in the Nyāyapraveśa on fallacies is resplendent with such examples of the uses of MCs to denote terms and proto-formal, material and controversial metaphysical relationships. The acceptability of statements using such MC terms and thus the controversial substitutions, depend (partially) upon their compatibility with prior non-formal metaphysical and ontological presuppositions. However, it is important to note that the MCs here refer solely to the names of components of the patterns (MCs) of the inference schemas; it is only the explicit denotations of these terms which bring into play non-formal metaphysical considerations for such evaluation. Such substitutions and discussions may ultimately bring non-formal considerations into play, but the obvious instruments of such metalogical discussions do utilize these second-order metalogical MCs.

Frequency of Darśana Relevant Substitution Criteria and

In order to justify my claims that there are 1) interesting degrees of falsification, and 2) significant appeals to daráana legitimization in the NP, I offer the following analysis.

I have counted all cases of substitution of the following metalogical terms: pakṣa² (pratijñā), hetu² (justification), dṛṣṭanta (exempaification), sapakṣa (similar example) and vipakṣa (dissimilar example). Because pakṣa² śabda («sound/word») has two possible meanings, I counted the instances of śabda in the pak-Falsifiability

sa/pratijñā twice to examine its frequency of possible empirical verification in both senses. It and the remaining terms are grouped under the following three general rubrics: 1) those substitutions to which the darśana assumptions were both relevant for legitimization and were operative; 2) those substitutions which were testable, capable of possible empirical verification, i.e. they comprise falsifiable claims; 3) of the latter cases, I examined those which would be considered empirically true, false or undecideable when considered as straightforward contemporary truth claims. For those MCs of pakṣa¹/pratijñā(s) using «śabda,» I further counted the frequency of possible falsification when the two meanings of ««śabda» («word» or as «sound») were examined separately (a./b. below). The numbers in the table below refer to the number of substitutions which occurred with each of the MCs listed at the left of the table.

Below is a summary of my analysis.

101	A	В	C A & B viewed as contemporary truth claims	
	Those Mc propo- sitions subject to Darśana legiti- mization	Those empiri- cally falsifi- able in principle		
			True False	Undeci- deable
Paksta/Pratijña (thésis)	29	30	111 161	3
	4		72 212	2
Hetu	19	27	17 10	
Drșțānta	12	12	2 10	
Sapakşa	23	25	11 14	
Vipakşa	9	9	4 5	
Total Substitutions	92	103	451 55a	
		103	31 ² 70 ^b	

a. «Sabda» considered as empirical «sound», not «word.»

b. «Śabda» considered as «Word,» i.e., the Vedas, not «sound.»

My conclusions are as follows:

First, almost all (90 %) of the metaphysical statements designated by MCs about the world referred to in the Buddhist inference schemas here are both subject to (A) darśana legitimization, and (B) are empirically falsifiable in principle. Thus a modern philosopher and a sixth century Buddhist logician are talking (roughly) about the same space-time mundane world; their publicly perceivable universes of discourse about truth claims are not widely disparate.

Second, while they are both talking about the same world (as above), all of the claims subject to darsana legitimization are also falsifiable in principle; that is, there are no special appeals here to e.g. the «intuition of the yogin» (yogipratyaksa). This counters the often heard, but ignorant claim that Indian philosophy habitually appeals to non-verifiable mystical-sounding «realms» by means of non-worldly, non-public unfalsifiable means (10).

Third, although both the Buddhist and the contemporary philosopher are still talking about the «same world,» (11) the Buddhists' claims, by contemporary Anglo-American-European philosophical standards (say the readers of *Mind* and the *Journal of Symbolic Logic* to take rather extreme examples), that

(10) I realize that his one text constitutes an insufficient sample. However, for the record, I would claim that this generalization is in fact a highly probable one and, although it is not demonstrated here, that it would be generally sound to generalize from this sample of an Indian manuel of inference and thus to generate such a general conclusion as above. Of course, using only one source, I have not done that here.

(11) Now it is obvious that the conclusions in the table are wholly my own; but I counter by stating that I have tried very honestly to «put myself in the frame of mind» («of Mind.» Talk about systematically misleading expressions! I might add that Buddhist philosophers such as Nāgārjuna and Dharmakīrti would be very aware of the illicit ontologizing nature of such locutions.) of my modern contemporaries as I have made the evaluations of these MC truth claims. I, of course, invite others to confirm or refute my conclusions by grubbing through both the English translations and the Sanskrit (and/or Chinese and/or Tibetan) text(s), and to empirically substantiate or refute my claims. I am quite aware that I can be inaccurate, but unless there are substantial errors, my general conclusions will still stand.

45 out of 103 implicit truth-claims would be considered true, and 55 would be considered false. This divergence strikes me as extremely significant; particularly so, if Indian philosophy is to be of any relevance for the systematic but open-minded contemporary philosopher who is neither already convinced that Indian philosophy is a religion/value panecca, which requires special pleading nor that such darśanas are without methodologically illustrative suggestions concerning the relationships between religious metaphysics, culture and ordinary-language empiricism.

Fourth, if only (approximately) 44 % of the explicit or implicit truth-claims found in this text can be considered true, albeit by contemporary standards, and only if by this, these truth-claims are to be construed as exhibiting such affirmative truth values as was seen to be sufficient for the legitimate philosophical controversies and presuppositions of sixth century darśanas, then the sources of such controversies, and even more so, the restricted substitution of MCs, plunges us back into the non-formal matrices of textual philology and the study of comparative/historical philosophies; i.e. these empirical textual sources. However, since there are such substitution rules in such sources, and since these rules are partially explicit, are partially systematized and only partially appeal to non-empirical relations in the schema. I hold that these rules do suggest that we have here a formalistic but not fully formalized (ideal-language) formal logic.

Fifth, since (approximately) 56% of the truth-claims would be considered empirically false, then the search for both the cultural reasons and the particular philosophical presuppositions and methodologies which generated these restricted ranges of substitution rules and their high degree of falsifiable truth-claims does become philosophically interesting and worthy of further cross-cultural study.

These conclusions may be of interest for those philosophers who may still consider that the history of philosophy, with its endless variety of systematic viewpoints, offers, in its careful comparisons, a contribution to contemporary methods of *doing* philosophy today. That is, the justification and the methodology

utilized by the Indian philosophers and logicians (and, of course, the Chinese, too) offers unique, rather novel, non-«Western» viewpoints, if and only if one holds that synchronic and comparative studies yield advantageous methodological knowledge for the modern philosopher. I do hold such an assumption; I also recognize that some do not. However, I would suspect that many of the reasons why one might not agree with me and with my cross-cultural methodological assumptions, may have their origins in just such prior historical and intra-Western historical comparisons.

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