



ROLE OF HYPOTHETICAL REASONING IN INDIAN EPISTEMOLOGY: A PHILOSOPHICAL REFLECTION

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Abstract:

The present paper attempts to explore Hypothetical reasoning, or *Tarka*, a crucial cognitive process in Indian epistemology, particularly in Nyaya and Vedanta schools. It enables philosophers to understand, infer, and make decisions by assuming hypothetical scenarios, navigating complex ideas and arguments. The logic of Hypothetical reasoning or *tarka* plays a vital role in both Nyaya and Vedanta schools, with Nyaya relying on it for logical reasoning and argumentation, and Vedanta using it for spiritual introspection and self-discovery. In the present research work, Tarka's definition, applications, and validity as a means of knowledge are explored, revealing its multifaceted nature and role in facilitating intellectual debates, resolving philosophical disputes, and fostering critical thinking.

Debates surrounding *tarka's* validity and relationship with other epistemological methods are examined, uncovering the nuances and complexities of Indian epistemological thought. By exploring *tarka's* diverse applications and validity, we gain a deeper understanding of Indian epistemology and insight into its role in intellectual debates, spiritual growth, and philosophical inquiry, highlighting the dynamic nature of Indian philosophical thought.

Key words: *Epistemology, Philosophy, Reasoning*

Introduction:

In Nyaya philosophy, hypothetical reasoning (*tarka*) is crucial for evaluating knowledge claims, integral to Indian thought's rational discourse, facilitating rigorous evaluation. "*Tarka* is the third non-



veridical ‘anubhava’ in the TS enumeration.”¹ This concept enables critical examination of conclusions drawn from reasoning or judgment, assessing logical soundness through implicative argumentation. While “*tarka*” means “argument” in an ordinary sense, in Nyaya, it technically denotes factitious or designedly false cognition. This concept is also known as *reductio ad absurdum*, suppositional reasoning, counterfactual reasoning, dialectical reasoning. *Tarka* identifies errors, challenges assumptions, and refines arguments, ensuring logically coherent knowledge claims.

Objectives:

Here are the three concise objectives of this paper:

- i. To understand the concept of *Tarka* (hypothetical reasoning) in Nyaya philosophy and its role in evaluating knowledge claims.
- ii. To analyse the technical meaning of *Tarka* as factitious or designedly false cognition and its distinction from its ordinary meaning as “argument.”
- iii. To explain how *Tarka* facilitates critical examination, error identification, assumption challenging, and argument refinement, ensuring logically coherent knowledge claims.

Methodology:

This paper uses qualitative research, analysing Nyaya philosophy through textual, conceptual, and logical analysis of *Tarka*, utilizing primary and secondary sources.

Discussion and findings:

The origins of *tarka*, a key concept in Indian epistemology, can be traced back to the Buddhist *prasanga* method of debate. This ancient approach focused on refuting an opponent’s assertion without necessarily presenting alternative perspectives. A crucial distinction exists between *prasanga* and *tarka*: whereas *prasanga* employs sceptical reasoning to reject both positions, *tarka* seeks to invalidate one viewpoint in order to establish the validity of another. Despite its Buddhist origins, *tarka* is integral to Nyaya philosophy, listed among the sixteen categories in the *Nyayasutra*. In early Indian thought, it



represented reasoning, and, as Ganeri observes, is the closest Sanskrit equivalent to “rationality.”ⁱⁱ Matilal defines *tarka* as hypothetical and indirect reasoning.ⁱⁱⁱ In Nyaya philosophy, *tarka* is not considered a *pramana*, or a direct path to knowledge, reflecting its grounding in empirical inquiry. According to Gautama, *tarka* involves “adducing logical grounds”^{iv} to ascertain truth among uncertain alternatives. Vatsyayana concurs, stating that when two contradictory alternatives seem equally possible, hypothetical reasoning helps resolve indecisiveness. Crucially, he distinguishes *tarka*, noting that “it is not *pramana*, but rather an auxiliary aid.”^v

Uddyotakara clarified the limitations of hypothetical reasoning, stating it supports other knowledge sources without defining their characteristics. As he noted, “*tarka* is like a *pramana* that can yield empirical knowledge.”^{vi} At this juncture, it is important to point out that Vacaspati Misra aligns with Vatsyayana and Uddyotakara on hypothetical reasoning, yet uniquely emphasizes elimination’s crucial role, making it his significant contribution to the field. He asserts that the method of elimination effectively proves one alternative logically impossible, thereby bringing the remaining option closer to truth, providing a nuanced approach to discerning plausible solutions.^{vii} Jayanta views *tarka* (hypothetical reasoning) as generating a strong presumption in favour of the *probandum*. When faced with doubt, both alternatives initially possess equal strength and specificity. However, *tarka*, while leaning toward one alternative, still acknowledges the possibility of the other.

In fact, the process of reasoning in *tarka* involves deducing an untenable proposition (*anistaprasanga*)^{viii} from a given proposition. The classic fire and smoke example illustrates this: Consider two alternatives: ‘the smoky object is fiery’ or ‘it is not fiery.’ If we assume the latter, we deduce ‘the object is not smoky,’ which directly contradicts our observation.

Tarka validates the inference of fire through the deduction of an inadmissible proposition from the contrary hypothesis, as illustrated by the hypothetical proposition: ‘If the object is fireless, it must be smokeless.’ This reasoning follows the general rule: ‘whatever has a mark (*vyapya*) has that which it is a mark of (*vyapaka*).’ In this case:



'The absence of fire is a mark of the absence of smoke.' Thus, assuming an object lacks fire, we logically conclude it lacks smoke, rendering it smokeless. However, this conclusion is directly contradicted by observation. As the modern *Naiyayikas* define *tarka* is the process of deducing from a mark that of which it is a mark, but it is false (*vyapyangikarenaanistavyapakaprasanjanarupah*).^{ix}

When a proposition established through any method of knowledge is doubted or disputed, we employ *tarka* to resolve the uncertainty. Through *tarka*, we hypothesize the contradictory proposition, revealing its inherent contradictions, thereby serving as the limit to doubt. However, since refuting one proposition doesn't automatically validate its opposite, *tarka's* role is supportive, not definitive. It is worthy to note here that Nyaya accepts *tarka* as an "aid or auxiliary to *pramana*, but not *pramana* by itself,"^x highlighting its auxiliary function in establishing truth.

In Nyaya philosophy, *tarka* (reasoning) is categorized into five types: *atmasrya*, *anyonyasrara*, *cakraka*, *anavasta* and *tadanyabadhitarthaprasanga*.^{xi} Notably, these five forms share a common logical structure and character, serving a unified purpose - to scrutinize and validate the soundness of reasoning or judgment.

Atmasraya, the first type of *tarka*, highlights the logical flaw in arguments that suggest something is self-dependent, originating from or sustained by itself. This is illustrated by: 'If A is the cause of A, it must be different from itself, because the cause is different from the effect.'

Anyonyasraya, the second type of *tarka*, highlights the contradiction in mutual dependence arguments. It can be stated as: 'If A depends on B and B depends on A, A cannot depend on B.' To say that 'B depends on A' is virtually to deny that 'A depends on B.'

Cakraka, the third type of *tarka*, involves exposing circular reasoning where a premise presupposes its own assumption. If A is pre-supposed in B and B is pre-supposed in C, then to explain A by C is to reason in a circle, because C inherently leads us back to A, forming a logical loop.



Anavasta, the fourth type of *tarka*, reveals the logical flaw of infinite regression, where explanations depend on an endless sequence of assumptions. Similarly, explaining A through B, B through C, and so on, *ad infinitum*, yields no meaningful explanation. Or, in other words, if we try to justify inference through further inference, it commits us to infinite regress, a logical flaw. This fallacy is concisely exposed by: 'If inference depends on inference for its ground, no inference is possible.'

Tadanyabadhitarthaprasanga, the third type of *tarka*, proves a conclusion's validity indirectly. It shows the opposite of the conclusion is absurd, contradicting established facts or universal laws. For instance, consider 'where there's smoke, there's fire.' If an object has smoke, it must be fiery. If not, then smoke would imply no fire, which is illogical. By disproving the opposite (this object is not fiery), we validate the original conclusion (this object is fiery), ensuring a sound reasoning.

Conclusion:

In conclusion, the Nyaya division of *tarka* into five kinds is logically unsound, prioritizing external applications over inherent nature. *Tarka* essentially serves as a tool to evaluate argument validity across inferential and non-inferential reasoning. While its conclusions require supplementary evidence (*pramanas*) for validation, aligning with reductio argumentation, the classic example illustrates its utility: "If A were not B, then A would not have been C; but it is *absurd* to conceive A as not-C (for it is *inconsistent* with our standard beliefs or rational activity).

Hence, A is B."^{xii} Despite this, the Nyaya school dismisses *tarka* as a reliable knowledge source due to its reliance on suppositions and counterfactuals lacking empirical basis. However, some argue empirical experience informs our understanding of absurdity and inconsistency, bridging this gap. In summary, *tarka is not an argument but a tool to test arguments*, potentially taking implicative argument form. Its value lies in facilitating critical thinking and logical scrutiny, even requiring additional validation. By recognizing



both strengths and limitations, we can leverage *tarka's* potential in philosophical inquiry and rational discourse.

References:

ⁱ Annambhatta, *Tarkasamgraha-Dipika on Tarkasamgraha*, trans. Gopinath Bhattacharya, Kolkata: Progressive Publishers, 2009, p. 351.

ⁱⁱ Ganeri, J., *Philosophy in Classical India*, London: Routledge, 2001, p. 151.

ⁱⁱⁱ Matilal, B. K., *The Character of Logic in India*, Eds. J. Ganeri and H. Tiwari, Delhi: OUP, 1999, pp. 45-46.

^{iv} Bijlwan, C. D., *Indian History of Knowledge*, New Delhi: Heritage, 1977, p. 21.

^v See *Nyaya-Bhasya*, 1.1.40.

^{vi} Bhardwaj, V., *Form and Validity in Indian Logic*, Shimla: Indian Institute of Advanced Study, 1990, p. 74.

^{vii} Bijlwan, C. D., *Indian History of Knowledge*, op cit., p. 32.

^{viii} Chatterjee, S., *The Nyaya Theory of Knowledge*, Calcutta: University of Calcutta, 1978, p. 44.

^{ix} Ibid.

^x Ibid., pp. 44-45.

^{xi} See *Tarkabhasa*, p. 32.

^{xii} Matilal, B. K., *The Character of Logic in India*, op cit., p. 46.