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उपमानम्

Knowing the Unseen through the Seen: Models and Analogy

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Abstract

Upamāna, "measuring alongside", is the device of knowing the unseen through the seen. It is the only tantrayukti in this series found in Kauṭilya's list alone: Kauṭilya defines it as "establishing the unseen by the seen", with an instruction from his chapter on the settlement of the countryside — the king "should favour, like a father, those whose exemptions have ended." Suśruta and Caraka have no upamāna among their tantrayuktis, but neither does without the thing itself: Suśruta's *nidarśana* and Caraka's *aupamya*, defined in his rules of debate, do the same work. This article quotes Kauṭilya's definition, sets it beside the Nyāya definition of upamāna as a means of knowledge and Caraka's aupamya, and distinguishes three uses of likeness in the śāstras: to learn what a word refers to (Nyāya), to name and explain (Caraka, Suśruta), and to guide conduct (Kauṭilya). Three objections are examined: that upamāna is only inference, that its absence from the medical lists shows it to be dispensable, and that an argument from likeness — "like a father" — can justify anything. It concludes that Kauṭilya's upamāna is a *model*: a known relation offered as the pattern for an unknown one, valid within the respect in which the likeness is well known; its modern forms are the model organism, the scale model, the guiding metaphor of a theory, and analogy in law.

Keywords: upamāna; aupamya; nidarśana; tantrayukti; analogy; model; similarity; sādṛśya; model organism; metaphor; analogical reasoning; Arthaśāstra; Nyāyasūtra; Caraka; Mīmāṃsā

1. प्रवेशः · Place in the lists

Upamāna is twelfth in Kauṭilya's list and absent from the lists of Suśruta and Caraka. It follows atideśa and pradeśa (TY-11, TY-12), and the sequence is natural: having shown how a text extends what it has said and points to what it will say, Kauṭilya turns to the widest form of extension — from what can be seen to what cannot. The word joins *upa-* ("near, alongside") with *māna* ("measure"): to measure one thing by placing another beside it.

2. लक्षणम् · The definition

> दृष्टेनादृष्टस्य साधनमुपमानम् ॥
>
> "Establishing the unseen by the seen is upamāna."
>
> *Kauṭilīya Arthaśāstra* 15.1.27

> "निवृत्तपरिहारान्पितेवानुगृह्णीयात्" इति ॥
>
> Example: "He should favour, like a father, those whose exemptions have ended."
>
> *Kauṭilīya Arthaśāstra* 15.1.28

Quoted from the Kośa. The Arthaśāstra e-text used elsewhere in this series reads the example corruptly as *nivṛttaparihārānpi tevānugṛhṇīyāditi*, with the syllables of *pitā iva* ("like a father") misdivided; the Kośa reading is the correct one.

The example comes from Kauṭilya's chapter on settling the countryside (AŚ 2.1), where new settlers are granted exemptions from taxes and dues for a period. When the period is over, the king is not simply to collect: he is to favour them as a father would. The relation between king and settlers is the unseen — a new relation without settled custom; the relation between father and children is the seen — known to all. The second is offered as the measure of the first.

3. लक्षणपरीक्षा · Testing the definition

3.1 Upamāna as a means of knowledge

The Nyāya school treats upamāna as one of the four means of valid knowledge:

> प्रसिद्धसाधर्म्यात्साध्यसाधनमुपमानम्
>
> "Upamāna is the establishing of what is to be established through likeness to the well known."
>
> *Nyāyasūtra of Gautama* 1.1.6

> प्रज्ञातेन सामान्यात्प्रज्ञापनीयस्य प्रज्ञापनमुपमानमिति । यथा गौरेवं गवय इति ।
>
> "Upamāna is making known what is to be made known, through commonality with what is known; as in 'as the cow, so the gavaya'."
>
> *Nyāyasūtra of Gautama* 1.1.6 (vatsyayana)

In the Nyāya example a person who knows the cow but not the wild *gavaya* is told "the gavaya is like the cow"; on seeing a cow-like animal in the forest he knows, "this is what is called gavaya". Vātsyāyana states that the fruit of upamāna is the knowledge of the relation between a name and what it names. Kauṭilya's definition shares the structure — known to unknown through likeness — but his fruit is different: not knowing a name, but knowing how to act.

3.2 Caraka's aupamya

Caraka lists *aupamya*, "comparison", among the terms of debate in the Vimānasthāna:

> अथौपम्यम्---औपम्यं नाम यदन्येनान्यस्य सादृश्यमधिकृत्य प्रकाशनं; यथा---दण्डेन दण्डकस्य, धनुषा धनुःस्तम्भस्य, इष्वासेनारोग्यदस्येति ॥

> "Now aupamya. Aupamya is making something known by means of its likeness to something else: as *daṇḍaka* by a staff, *dhanuḥstambha* by a bow, the giver of health by an archer."
>
> Caraka, *Vimānasthāna* 8.42

Caraka's examples are names of diseases and of the physician, each understood through a familiar object: the rigid body of *daṇḍaka* by a staff, the arched body of *dhanuḥstambha* by a bow, the physician who strikes the disease by an archer who strikes the target. This is likeness used to name and to explain. Suśruta's *nidarśana* (TY-22) does the same at the level of process: "as fire, joined with wind, grows in dry brush, so a wound vitiated by vāta, pitta and kapha."

3.3 Three uses of likeness

Source	Seen	Unseen	Fruit
Nyāya	The cow	The gavaya	**Knowing**: what the word "gavaya" denotes
Caraka (aupamya), Suśruta (nidarśana)	Staff, bow, archer; fire in brush	Diseases, the physician; the spreading wound	**Naming and explaining**
Kauṭilya (upamāna)	A father with his children	The king with settlers whose exemptions have ended	**Guiding conduct**: how to act in an unfamiliar relation

Kauṭilya's use is the one most distinctive of a science of governance. A new situation without precedent is given a pattern by being set beside an old and well-understood one. The father model carries a determinate content: continued support (*anugraha*) after the period of indulgence, care for the dependants' growth, firmness without exploitation.

3.4 The Mīmāṃsā inversion

Śabara gives the same pramāṇa a different direction:

> उपमानमपि सादृश्यमसंनिकृष्टे ऽर्थे बुद्धिमुत्पादयति, यथा गवयदर्शनं गोस्मरणस्य ।
>
> "Upamāna too: likeness produces a cognition of an object not in contact; as the sight of a gavaya produces the remembrance of the cow."
>
> *Mīmāṃsāsūtra of Jaimini* 1.1.5 (shabara)

For the Mīmāṃsaka, upamāna knows the absent (the remembered cow) as like the present (the gavaya). Kauṭilya's "the unseen by the seen" runs the other way. The two directions together show that upamāna is a relation, not a route: likeness can be used to reach the absent from the present or the new from the familiar.

4. पूर्वपक्षः खण्डनं मण्डनं च · Objections and replies

4.1 Is upamāna not just inference?

ननु “प्रत्यक्षेणाप्रत्यक्षसिद्धेः” इति न्यायसूत्रे एव पूर्वपक्षः — यथा धूमेन प्रत्यक्षेण अप्रत्यक्षस्य वह्नेः ग्रहणम् अनुमानं, तथा पित्रा प्रत्यक्षेण अप्रत्यक्षस्य राजवृत्तस्य ग्रहणम्; अतः उपमानम् अनुमानम् एव इति चेत्, न। अनुमाने व्याप्तिः — यत्र धूमः तत्र वह्निः। उपमाने तु व्याप्तिः नास्ति — न “यत्र पितृत्वं तत्र राजत्वम्” इति नियमः। सादृश्यम् एव तत्र आश्रयः, न अविनाभावः। तन्त्रयुक्तिदृष्ट्या तु प्रमाणविवादः न निर्णायकः: ग्रन्थे “पितेव” इति वचनं पाठकस्य बुद्धौ प्रसिद्धं प्रतिरूपं स्थापयति, येन अप्रसिद्धे विषये आचरणं निश्चीयते। स एव ग्रन्थगतः व्यापारः, अनुमानात् भिन्नः।

Objection: the Nyāyasūtra itself states the prima facie view “because the imperceptible is established by the perceptible”: as the unseen fire is grasped through the seen smoke, which is inference, so the unseen conduct of the king is grasped through the seen father. So upamāna is only inference. **Reply:** No. Inference rests on pervasion — wherever there is smoke there is fire. In upamāna there is no pervasion: there is no rule “wherever there is fatherhood there is kingship”. Likeness alone is its basis, not invariable concomitance. And from the standpoint of tantrayukti the dispute about the means of knowledge is not decisive: in a text, the words “like a father” set a well-known pattern before the reader’s mind, by which conduct in an unfamiliar matter is determined. That is the textual function, and it differs from inference.

Śaṅkā–samādhāna composed for this article.

4.2 If the physicians omit it, is it not dispensable?

ननु सुश्रुतचरकयोः तन्त्रयुक्तिपरिगणने उपमानं न दृश्यते। यदि आयुर्वेदः तेन विना सिध्यति, तर्हि तत् अनावश्यकम् इति चेत्, न। नाम्नः अभावः, न अर्थस्य। सुश्रुतः “दृष्टान्तव्यक्तिर्निदर्शनम्” इति तम् एव व्यापारं निदर्शने अन्तर्भावयति; चरकः “औपम्यं नाम यदन्येनान्यस्य सादृश्यमधिकृत्य प्रकाशनम्” इति वादमार्गपदेषु पृथक् गणयति। कौटिल्यस्य तु विशेषः — तस्य उपमानं आचरणस्य नियामकम्, यत् राजशास्त्रे अपरिहार्यम्: नवे व्यवहारे यत्र न पूर्वाचारः, तत्र प्रसिद्धसम्बन्धः एव मार्गदर्शकः। अतः वैद्याः उपमानं न त्यजन्ति, किन्तु अन्यत्र गणयन्ति; कौटिल्यः तु तस्य विशिष्टं प्रयोजनं दर्शयति।

Objection: upamāna does not appear in the lists of Suśruta and Caraka. If Āyurveda manages without it, it is unnecessary. **Reply:** No. The name is absent, not the function. Suśruta includes the same operation in nidarśana — “nidarśana is the explicit statement of an illustration”; Caraka lists it separately among the terms of debate — “aupamya is making something known by means of its likeness to something else”. Kauṭilya’s use is distinctive: his upamāna regulates

conduct, which a science of governance cannot do without — in a new kind of dealing where there is no established practice, a well-known relation is the only guide. So the physicians do not abandon upamāna; they count it elsewhere. Kauṭilya shows its particular purpose.

Śaṅkā–samādhāna composed for this article.

4.3 Can "like a father" not justify anything?

ननु सादृश्यं सर्वत्र किञ्चित् अस्ति। "पितेव" इत्युक्ते पिता दण्डयति अपि, नियच्छति अपि — अतः राजा प्रजाः यथेष्टं दण्डयेत् इति अपि सिध्येत्। "अत्यन्तप्रायैकदेशसाधर्म्यादुपमानासिद्धिः" इति न्यायसूत्रे अपि पूर्वपक्षः। अतः उपमानम् अनियतम् इति चेत्, न। "प्रसिद्धसाधर्म्यात्" इति लक्षणे नियमः — न यत् किञ्चित् साधर्म्यम्, किन्तु प्रकृते प्रसिद्धं। कौटिल्यवाक्ये "अनुगृह्णीयात्" इति क्रिया साधर्म्यस्य अंशं नियच्छति: पितुः अनुग्रहः एव अत्र उपमीयते, न दण्डः। निवृत्तपरिहाराणां प्रसङ्गः च तम् एव अंशं प्रकाशयति। एवं क्रिया प्रकरणं च उपमानस्य सीमां कुरुतः। सीमारहितम् उपमानं हेत्वाभासः, सीमासहितं तु प्रमाणवत् मार्गदर्शकम्।

Objection: there is some likeness everywhere. When "like a father" is said — a father also punishes and restrains — it would follow that the king may punish his subjects as he pleases. The Nyāyasūtra itself states the prima facie view that "upamāna is not established, whether the likeness is complete, predominant or partial". So upamāna is unregulated. **Reply:** No. The definition contains its rule: "through likeness to the *well known*" — not any likeness, but the likeness that is well known in the matter at hand. In Kauṭilya's sentence the verb "should favour" fixes the respect of likeness: it is the father's support that is compared here, not his punishment. And the context — settlers whose exemptions have ended — brings out the same respect. Thus the verb and the context set the limit of the analogy. An analogy without a limit is a fallacy; an analogy with its limit guides as surely as a means of knowledge.

Śaṅkā–samādhāna composed for this article.

5. सिद्धान्तः · The settled view

अप्रसिद्धे विषये — ज्ञाने, नामनि, आचरणे वा — प्रसिद्धस्य सम्बन्धस्य प्रतिरूपत्वेन उपन्यासः, यस्य साधर्म्यांशः क्रियया प्रकरणेन च नियम्यते, तत् उपमानम्।

"Upamāna is the presentation of a well-known relation as the pattern for an unfamiliar matter — in knowing, in naming or in acting — the respect of whose likeness is fixed by the verb and the context."

Definition composed for this article.

"Pattern" (*pratirūpa*) is the key word: upamāna offers a model. The three domains gather the Nyāya, Caraka–Suśruta and Kauṭilya uses; the final clause meets the objection that likeness is everywhere.

6. आधुनिकसंवादः · The modern counterpart

Classical form	Modern counterpart
Kauṭilya: "the unseen by the seen"	The **model**: a model organism for human biology, a scale model for a dam, a simulation for a policy
Kauṭilya: "like a father"	Guiding metaphors in governance and management ("stewardship", "the state as parent"); **analogical reasoning in law** from settled to unsettled cases
Caraka: *aupamya* in naming	Metaphorical terminology in science: "cell", "current", "bottleneck", "wave"
Nyāya: *prasiddha-sādharmya*	The validity condition of a model: the respects in which model and target are known to correspond (in biomedicine, the **translational validity** of an animal model)

Every model raises the question that the Nyāyasūtra raised as an objection: in what respect is the likeness complete, predominant or partial? A mouse is a good model of human metabolism in some respects and a poor one in others. The rule "through likeness to the well known" is the rule of good modelling: state the respect.

7. प्रयोगाः · Uses

7.1 In research

When using a model, analogy or metaphor, state the respect of likeness and its limits, as Kauṭilya's verb fixes the respect of "like a father". Report where the model is known to fail. When importing a concept from another field ("ecosystem" into economics, "immune system" into computing), list what is carried over and what is not.

7.2 In teaching

Introduce an unfamiliar idea through a familiar one, then immediately ask students where the comparison breaks down. Caraka's three examples — staff, bow, archer — make a good exercise: in what respect is the physician like an archer, and in what respect not?

7.3 In daily life

Faced with a new role or relation — a new team, a new responsibility — we look for a familiar relation to guide us. Kauṭilya's example teaches both the value of such a model and its discipline: choose the respect deliberately. "Like a father" in support, not in control.

8. अभ्यासः · Exercise

1. Find two other uses of *iva* ("like") in the Arthaśāstra or a medical text that guide conduct or explain a process. For each, state the seen, the unseen, and the respect of likeness.

2. Choose a model used in your field. Write a table of the respects in which it corresponds to its target, the respects in which it does not, and the evidence for each.
3. Write an analogy that would be misleading if its respect were not fixed, and then rewrite it with a verb and context that fix the respect.

9. उपसंहारः · Conclusion

Upamāna establishes the unseen by the seen. Kauṭilya alone lists it as a tantrayukti, and his example — the king favouring settlers "like a father" — shows its use in guiding conduct where no precedent exists. Nyāya uses likeness to learn names, Caraka and Suśruta to name and explain; Kauṭilya to act. Upamāna is distinguished from inference because it rests on likeness, not pervasion; it is not dispensable in medicine, which counts it under other heads; and it is not unregulated, for its respect is fixed by the verb and the context. The model is its modern form, and the question every model must answer is the one the Nyāyasūtra asked: likeness in what respect?

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