

History of Logic from Aristotle to Gödel by Raul Corazzon | e-mail: [rc@ontology.co](mailto:rc@ontology.co)

## The Stoic Doctrine of *Lekta* (Sayables)

### THE PLACE OF THE DOCTRINE OF *LEKTA* IN THE STOIC DIALECTIC

SVF = Hans von Arnim, *Stoicorum Veterum Fragmenta*, Lipsia 1903-1905 (the standard collection of the Fragments of ancient Stoics).

"In moving from the theory of knowledge to the other topics which the Stoics include within the third branch of their philosophy, it must be noted that they draw a sharp distinction between logic and language. All the remaining topics can be grouped either on one side of this distinction or the other. The Stoics define language as utterance. Language is sound. It is corporeal, material, and sensible. (135) Hence, language is part of the world of real being. Words, real beings themselves, are natural signs of natural objects. Logic, on the other hand, falls within the category of the incorporeals. Logical statements are *lekta*. (136) They have meaning, but since they are not corporeal, they do not have full being. They exist only intramentally. The *lekta* include predicates, arguments, syllogisms, and fallacies. They are not natural signs of natural objects.

This classification of logical statements as *lekta* has important implications for the way in which the Stoics handle dialectic, or logic as a formal branch of philosophical investigation. (137) Their logic is propositional. The variables in Stoic syllogisms are propositions, in contrast to the variables in Aristotelian syllogisms, which tend to be terms and classes. The Stoics are sensitive to the grammatical precision of their logical propositions; they elaborate a more precise way of expressing negation than had been used hitherto, prefixing a negative word to the entire proposition and not just to the verb. Thus, instead of saying "It is not day," they say "Not: it is day." While less idiomatic, this is a more unambiguous way of specifying what is being negated, similar to the usage "Not-p" in modern symbolic logic. Indeed, the technical ingenuity of Stoic logic is considerable, resulting in a number of ideas which had been neglected in Aristotle's logic.

Since *lekta* are not natural signs of natural objects, the Stoic preference in logic is for hypothetical syllogisms. (138) Unlike the categorical, deductive, or inductive syllogisms used by Aristotle, the hypothetical syllogism does not begin with an axiomatic statement about a general class of beings, nor does it conclude with a statement about the fixed, essential nature of things. For the Stoics, such a procedure would have been in conflict with a propositional logic whose aim is to demonstrate the logical tenability of the conclusions of one's premises, not their empirical or ontological verifiability. At the same time, and although they are *lekta*, the Stoics' hypothetical syllogisms are compatible with the physics which they espoused, for their syllogisms deal with the changing relations between concrete individual events rather than with a changeless structure of fixed essences. (139) The five main types of syllogisms used by the Stoics may be schematized as follows:

Conditional: "If it is light, it is day."

Conjunctive: "It is light and it is day."

Disjunctive: "Either it is light or it is day."

Causal: "It is light because it is day."

Likely: "It is more likely that it is day than that it is night."

In all cases both the initial premises and whatever conclusions may follow from them refer to transient events. Having demonstrated a proposition by means of these syllogisms, one has still not claimed to have said anything about an enduring natural phenomenon. This is a perfectly reasonable choice for the Stoics given both their physics of dynamic events and their conception of the *lekta*." (pp. 53-55)

## Notes

(135) *SVF*, 1, 74; 2, 140-41, 144a.

(136) See the references cited in note 35 above; Diogenes Laertius, *Lives* 7. 63-81.

(137) The traditional view of Stoic logic, treating it as beneath consideration because of its departures from Aristotelian logic, is stated clearly by Carl Prantl, *Geschichte der Logik im Abendlande* (Leipzig, 1927), 1, 401-96. It has been superseded by a positive reinterpretation of Stoic logic, marked by two trends. One understands Stoic logic and its differences from Aristotelian logic in the light of its connections with the rest of the Stoic system. The most important studies in this area are Urs Egli, *Zur stoischen Dialektik* (Basel, 1967), pp. 93-104; Michael Frede, *Die stoische Logik*, *Abhandlungen der Akademie der Wissenschaften in Göttingen, philosophisch-historische Klasse*, 3:88 (Göttingen, 1974); and Virieux-Reymond, *La logique et l'épistémologie des Stoïciens*. See also Bréhier, *Hellenistic and Roman Age*, pp. 41 fr.; V. Brochard, *Études de philosophie ancienne et de philosophie moderne*, nouv. ed. I Paris, 1926), pp. 220-51; Carlo Diano, *Forma ed evento: Principii per una interpretazione del mondo greco* (Venezia, 1952), pp. 9-20; Edelstein, *Meaning of Stoicism*, pp. 27-29; Goldschmidt, *Le système stoïcien*, pp. 82-83; Josiah 13. Gould, "Chrysippus: On the Criteria for the Truth of a Conditional Proposition," *Phronesis*, 12 (1967), 152-61; *Chrysippus*, pp. 66-88; Charles H. Kahn, "Stoic Logic and Stoic Logos," *Archiv für Geschichte der Philosophie*, 51 (1969), 158-72; Lorenzo Pozzi, "Il nesso di implicazione nella logica stoica," *Atti del convegno di storia della logica*, Parma, 8-10 ottobre 1972 (Padova, 1974), pp. 177-87; Giulio Preti, "Sulla dottrina del *semeion* nella logica stoica," *Rivista critica di storia della filosofia*, 2 (1956), 5-14; Reymond, "La logique stoïcienne," *Revue de Théologie et de Philosophie*, n.s. 17 (1929), 161-71; Carlo Augusto Viano, "La dialettica stoica," *Rivista di filosofia*, 49 (1958), 179-227; Antoinette Virieux-Reymond, "Le 'sunemmonon' stoïcien et la notion de la loi scientifique," *Studia Philosophica*, 9 (1949), 162-69.

The second group consists of scholars primarily interested in modern logic, who have rediscovered Stoic logic because of the affinities they perceive between it and the school of Carnap and Frege. The essay which began this movement is Jan Łukasiewicz, "Zur Geschichte der Aussagenlogik," *Erkenntnis*, 5 (1935), 111-31. The most important technical treatment of Stoic logic within this or any other perspective is Benson Mates, *Stoic Logic* (Berkeley, 1953). See also Nimio de Anquin, "Sobre la logica de los Estoicos," *Sapientia*, 11 (1956), 166-72; Oskar Becker, *Zwei Untersuchungen zur antiken Logik* (Wiesbaden, 1957); I. M. Bochenski, *Ancient Formal Logic* (Amsterdam, 1951), pp. 77-102; William Kneale and Martha Kneale, *The Development of Logic* (Oxford, 1962), pp. 113-76; Leo Lugarini, "L'orizzonte linguistico del sapere in Aristotele e la sua trasformazione stoica," *Il Pensiero*, 8 (1963), 327-51; Jürgen Mau, "Stoische Logik. Ihre Stellung gegenüber der aristotelischen Syllogistik und dem modernen Aussagekalkül," *Hermes*, 85 (1957), 147-58; Mario Mignucci, *Il significato della logica stoica*, 2a ed. (Bologna, 1967); Jan Mueller, "An Introduction to Stoic Logic," in *The Stoics*, ed. Rist, pp. 1-26.

(138) *SVF*, 2, 182, 207-08, 213, 215, 241-42, 245.

(139) For the parallels in physics see *SVF*, 2, 13, 114, 395-97. Good analyses of this point can be found in Jacques Brunschwig, "Le modèle conjonctif," *Les Stoïciens et leur logique*, *Actes du Colloque de Chantilly*, 18-22 septembre 1976 (Paris, 1978), pp. 61-65; Edelstein, *Meaning of Stoicism*, pp. 27-29; Michael Frede, "Stoic vs. Aristotelian Syllogistic," *Archiv für Geschichte der Philosophie*, 56 (1974), 1-32; Goldschmidt, *Le*

*ystème stoïcien*, pp. 82-83; Gould, "Chrysippus," *Phronesis*, 12 (1967), 152-61; Chrysippus, pp. 66-88; A. A. Long, "Dialectic and the Stoic Sage," in *The Stoics*, ed. Rist, pp. 101-24; Virieux-Reymond, "Le 'sunemmenon' stoïcien," *Studia Philosophica*, 9 (1949), 162-69. William H. Hay, "Stoic Use of Logic," *Archiv für Geschichte der Philosophie*, 51 (1969), 145-57 argues unconvincingly that the Stoic syllogisms also reflect an interest in abstract subjects and universal conclusions.

(140) *SVF*, 2, 368-75. On the other hand, Andreas Graeser, "The Stoic Categories," *Les stoiciens et leur logique*, pp. 199-221; "The Stoic Theory of Meaning," in *The Stoics*, ed. Rist, p. 78 sees the categories as linguistic expressions signifying syntactical classifications.

(141) *SVF*, I, 91.

From: Marcia L. Colish, *The Stoic Tradition from Antiquity to the Early Middle Ages. I. Stoicism in Classical Latin Literature*, Leiden: Brill 1985.

### THE LEKTON AS WHAT IS SAID OR PREDICATED OF SOMETHING

"4.1.1 According to *SVF* 1, 89, Zeno of Citium, the founder of the Stoic school, made a distinction between a cause, which is a body or *soma*, and that of which it is the cause, which is called *symbebekos*, consequence, or *kategorerna*, predicate. Stobaeus, who gives this information, cites as examples of causes or bodies practical wisdom (*phronesis*), the principle of life (*psyche*), and self-control (*sophrosyne*); and as examples of what is caused by these bodies being wise (*phronein*), living (*zen*), and being temperate (*sophronein*). For the Stoics a body or *soma* is everything that acts or undergoes action (*SVF* II, 336, 340). What is done or undergone by such agents or patients, the action or passion, is a *kategorema*, which in contrast with the somatic agents or patients is characterized as asomatic (*asomaton*) Sextus M IX, 211) gives the following examples. The lancet and the flesh are bodies; the lancet is the cause of an asomatic *kategorema*, namely being cut, with respect to the flesh. Fire and wood are bodies; the fire is the cause of an asomatic *kategorema*, namely being burnt, with respect to the wood. Further examples can be found in *SVF* II, 349, where it is also added that the flesh is the cause of the cutting with respect to the lancet.

The verbal character of that which is caused was stressed by the Stoics against those who maintained that it could be indicated by nominal expressions (SE, *PH* III, 14). If the sun or the sun's heat makes the wax melt, we have to say that the sun is the cause, not of the melting of the wax (*tes chyseos*), but of the wax being melted, of a *kategorema* which is indicated by an infinitive (*tou cheisthai*). Clement of Alexandria (*SVF* III, 8, p. 263) even makes an explicit distinction, in a somewhat similar context, between 'is cut' (*temnetai*), which is the actual *kategorema*, and the infinitive 'to be cut', which is the name (*ptiptosis*) of the *katkategorerna*." pp. 45-46

(...)

"The strongest proof that the term *lekton* was used to designate that which is said or predicated of something, as a synonym of *kategorema* and in the typical frame of the Stoic theory of predication, is the fact that it is so often qualified by the attribute *asomaton*. In many contexts one can make sense of this characterization only by taking *lek ton* as standing for the action or passion, the *pragma* which is signified by the verb, in contrast with the *somata* which perform or undergo the action. It is therefore time to try to throw more light upon the ontological and psychological aspects of that which the Stoics called *asomaton*.

4.1.5. As for the ontological aspects, I shall confine myself to a rough outline; for details and controversial points I refer to Bréhier (1962), Goldschmidt (1969), Hadot (1968 and 1969), and Rist (1969). At the top of the Stoics' ontological hierarchy we find the *ti*. These somethings are divided into the *on* and the *me on*, the sphere of the existent and the sphere of the non-existent. To the *on* belong the *somata*, the things that can perform or undergo actions. In terms of the Stoic categories a *soma* is composed of *hyle*, matter, and *poiotes*, determining quality. To the *me on*

belong the void, place, time, and the *lekta*. These four *asomata* do not have an independent existence of their own; they are only thought and said. A *lekton*, as we have seen, belongs to a *soma* (*hyparchein*) when the *soma* actually performs or undergoes the action concerned, but in itself it does not have the same kind of existence as a *soma* has. What is predicated of a *soma* is an event that occurs at the periphery of the domain in which bodies act and are acted upon; the actuality of the event entirely derives from the body by which it is caused. In terms of the Stoic categories the *lekton* has to be associated with the *pos echon*, the ways of behaving of a body, and the *pros ti pa's echon*, its ways of behaving in relation to something else.

4.1.6. Turning now to the psychological side of the aromatic *lekton*, I first call attention to a passage (DL VII, 51) in which two divisions of presentations (*phantasiai*) are mentioned. One is into those of living beings possessed of reason and speech (*logikai*) and those of living beings that are deprived of these faculties (*alogoi*). The presentations of the first group are also called *noeseis*, in a broad sense of that word (Cf. *SVF* II, 89). The second division divides presentations into those of sense-perception (*aisthetikai*) and those of thought in the narrower sense (*dianoias*). To the latter group belong the presentations of *asomata* and of the other things that are apprehended only by means of the *logos*. Parallel to this second division into presentations of sense-perception and presentations of thought we often find a distinction between *periptosis* and *metabasis*: between direct acquaintance by means of the senses (for instance, with something white or black, sweet or bitter) and the formation of ideas, which consists in a kind of transition from sense-perception to something else. The *metabasis* is characteristic of man (SE, *AM* VIII, 276, 288; Epictetus, *Dissertationes* I, 6, 10). This creative power of the human mind amounts, however, to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses; it is impossible to find in thought anything which one does not possess as known by experience (SE, *AM* VIII, 58, 60). Sextus gives the following examples of *metabasis* (*AM* I, 25, III, 40, VIII, 59, IX, 393, XI, 250). Because of a likeness of Socrates, which has been seen, we conceive of Socrates, who has not been seen. Starting from the common man we move on to a conception of a giant. By decreasing the size of the common man we grasp a conception of a pygmy. By way of composition we derive from man and horse the conception of a thing we have never perceived, a centaur. DL VII, 52-53, gives a more extensive list of possibilities. The queer thing is that he contrasts *periptosis* not with *metabasis* generally, but with such species of *metabasis* (in Sextus's sense) as resemblance, analogy, transposition, composition, and opposition. *Metabasis* occurs as one of the species: some ideas are formed by transition, for instance *lekta* and place, both *asomata*. This may be just a mistake; or the word *metabasis* may have been used by some in a generic sense and by others in a more special sense, without much further difference of meaning.

Now the *lekton* was defined as that which exists *kata logiken phantasia*, by way of a presentation which is typical of a living being possessed of reason and speech (DL VII, 63; SE, *AM* VIII, 70). Sextus adds that a *logike phantasia* is a presentation in which it is possible to set the thing presented before the mind by means of speech (*logos*). This can be connected with what DL, VII, 49, says: first comes the presentation and then follows thought (*dianoia*), which is capable of expressing things in speech (*eklaetike*) and expresses that which it undergoes by the influence of the presentation, by means of an utterance. From elsewhere (*SVF* II, 236) we know that the Stoics called the *noemata* by the name of *ekphorika*, things capable of being expressed in words.

The view that the thinking faculty is capable of forming, on the basis of the materials offered by sense-perception, new presentations which are arrived at by a process of *metabasis* and exist only in so far as they are thought and expressed in words, was illustrated by means of the following simile (SE, *AM* VII, 409). A trainer or drill-sergeant who is teaching a boy rhythm and how to make certain motions sometimes takes hold of the boy's hands and at other times stands at a distance and offers himself as a model for the boy's imitations, by making certain rhythmical motions. In the same way some of the objects presented produce the impression in the soul as it were by touching and contact with it (such as white and black and *somata* generally), whereas others are not of this nature, since in their case the principal part of the soul has presentations which are not caused by them but are formed on the occasion of their occurrence (*tou hegemonikou ep'autois phantasioumenou kai ouch hyp'auton*), as is the case with asomatic *lekta*. Sextus cites this simile in connection with the question of how presentations of asomatic *lekta* are possible. Since an *asomaton*

neither effects nor suffers anything, it cannot produce presentations in the soul. The Stoics apparently solved this problem by pointing out that just as the boy makes both movements which are caused by the trainer and spontaneous movements, so the soul has both presentations that are caused by *somata* and spontaneous presentations -- for instance, of *lekta*. The *lekta* do not cause their presentations, but those presentations are produced by the soul itself, although this spontaneous production is limited to certain operations on the impressions of sense-perception.

That *lekta* are merely thought and that nothing directly corresponds to them in the world of existing *somata* is confirmed by *SVF* II, 521. The Stoics considered time and *asomata* generally as existing only in thought, without the reality of bodies which consists in causal activity. It looks as if this were contradicted by a passage in Plutarch (*De communibus notitiis contra Stoicos* 1084 c), where such activities as walking and dancing (*ton peripaton, ten orchesin*) are counted among the *somata*. This can be connected with what Seneca (*Epistula* 113, 23; *SVF* II, 836) tells us about a controversy between Cleanthes and Chrysippus concerning the nature of walking (*ambulatio*). Cleanthes contended that it is *pneuma* which has been sent down from the principal part of the soul into the feet; Chrysippus maintained that it is the principal part of the soul itself (*a soma*). To solve the apparent contradiction we probably have to distinguish between the *Om* as far as it is in a certain state or is disposed in a certain way (*pos echon*) and that state itself, considered on its own. If the action or passion is regarded as realized in *a soma*, it is, as it were, an aspect of that *soma*. This point of view was strongly emphasized by Chrysippus, here and elsewhere. But if the action or passion is contrasted with the *soma*, as that which is caused or undergone by it, it is seen to have a status of its own; from this point of view it is something asomatic and a mere product of thought.

4.1.7. It may be concluded, I think, that at least one of the ways in which the word *lekton* was used by Stoic philosophers was to designate that which is said or predicated of something. The *lekton* or *kategorema* is an asomatic *pragma*, an action or passion which is performed or undergone by a *soma*. From an ontological point of view the *lekton-kategorema-pragma* is totally different from the *soma*. *Somata* are the real things which are characterized by their capacity of acting and being acted upon. The actions or passions themselves are merely thought and expressed in words; they are presentations which are spontaneously formed by a transition from sense-experience and made known by spoken sounds, without having a direct counterpart in somatic reality. Given this ontological and psychological peculiarity of the *lekton*, it is not unlikely that almost from the beginning the word *lekton* could also be taken as referring to that which is only (thought and) said. If the *lekton* as such does not really exist and is nothing but a spontaneous product of thought, it is quite natural to see it not only as that which is said of a *soma*, but also as that which is merely an expressed thought, only something said." (pp. 51-55)

From: Gabriel Nuchelmans, *Theories of Proposition. Ancient and Medieval Conceptions of the Bearers of Truth and Falsity*, Amsterdam: North-Holland 1973.

## RELATED PAGES

[Index of the Section: History of Logic from Aristotle to Gödel](#)

[The Dialectic from Zeno to Chrysippus](#)

[Stoic Philosophy of Language, Grammar and Rhetoric \(under construction\)](#)

[Annotated Bibliographies on Ancient Stoicism:](#)

[Stoic Logic. The Dialectic: First Part: A - E](#)

[Stoic Logic. The Dialectic: Second Part: F - Z](#)

[Early Stoic Logicians: Zeno of Citium, Cleanthes, Chrysippus](#)

[Philosophy of Language, Grammar and Rhetoric](#)

[On the website "Theory and History of Ontology" \(\[www.ontology.co\]\(http://www.ontology.co\)\)](#)

[The Stoic Doctrine of \*Supreme Genera\* \(Categories\)](#)

[The Stoic Doctrine of "Something" as Supreme Genus \(under construction\)](#)

[Stoic Theory of Categories](#)

[Stoic Ontology](#)

