Notes on Stoic Logic and Semantics

1. Sayables, or *Lekta*

(1) A *lekton* is what can be said about something. It is what we 'reveal by an utterance' (LS33B 2). When we say, "Socrates smiles", there is the utterance (φονή, *phonê*), which has meaning, or is significant (σημαντικός, *sêmantikos*), insofar as it expresses a *lekton* and is thus a 'signifier'; and there is Socrates himself, the 'name-bearer'. These two parts are bodies.

(2) A sayable (λέκτον, *lekton*) is a subsisting incorporeal entity. It is real, not fictional, even though it is not body, and therefore not involved in any causal interaction. *Lekta* are not bodies, so do not exist, and so *lekta* do not cause anything and are not caused by anything. They express the content (or meaning?) of what we say.

(3) A *lekton* is what subsists in accordance or correspondence with a rational impression (see LS33C, F). Does this mean that *lekta* are mind-dependent? Not quite: as Sextus reports (see LS27E 2), the mind (i.e. *hêgemonikon*) is impressed in relation to them, not by them, because of their incorporeality.

(4) Given the Stoic idea that the world is imbued with reason, and that it is a thoroughly rational structure, *lekta* are more like a system of 'objective parameters' that mirror, or represent, the world's intrinsic rationality. So, a *lekton* in a sense stands between us and the world, and it is the entity onto which our thoughts and language is mapped.[1] It is thus through, and by means of, *lekta* that we can understand the world and make it intelligible. This suggests an isomorphism between the corporeal causal/rational flow of the world, and the pattern of conceptual or semantic relations between *lekta*. Although we (our minds) are affected by the things in the world (through impressions), our grasp of these things is *relative* to the *lekta* that match the corporeal nature of things (see LS34D).

(5) An example perhaps illustrates this parallel. Sextus reports that 'the fire, a body, becomes the cause of the wood, a body, of the incorporeal predicate 'being burnt' (LS55B). The idea seems to be this: fire causes wood to burn, but since the wood already exists, no new body is generated (cf. the growing argument); the existing wood becomes amenable to a new predicate: a new predicate is now true of the wood. So, a different thing can be said about it: a new *lekton* applies to this portion of matter that is now slightly differently configured.

(6) There are two sorts of *lekta*. An incomplete *lekton* is a predicate (κατηγόρεμα, *katêgorema*), such as 'walks'; perhaps comparable to open sentences in predicate logic. Complete *lekta* (ἀξιώματα, *axiômata*) can be compared to propositions, since they are the entities that can have truth values (see LS34A, B). Yet: since complete *lekta* are sentences, and mean what the utterer means, they have mood and tense. Some *lekta* may also cease to subsist. For instance, the truth of an indexical like 'It is day' depends on the time of utterance (cf. LS34F).

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1   See Sedley, D. (2005). Stoicism. Routledge Encyclopedia of Philosophy.
    https://www.rep.routledge.com/articles/stoicism/v-2/the-lekton.

2. Conditionals and Indemonstrables

(1) A valid argument is such that the conclusion 'follows' from the conjunction of the premises. The nature of this 'following-relation' is hence crucial: we want to avoid that truth leads to falsity. The move from premises to conclusion must preserve truth. Hence there is debate about conditional propositions, or 'if…then' statements.

(2) A weaker notion goes back to Philo (LS35B 1). A conditional $P \rightarrow Q$ is true if it is not the case that P is true and Q is false. In other words, $P \rightarrow Q$ is *false* if P is true and Q is false. This captures the intuition that a conditional should not lead from truth to falsity. But there are counterexamples:

$P \rightarrow Q$: If it is day, (then) I am talking.
It *is* day; but I do *not* talk: P is true but Q is false, so $P \rightarrow Q$ is false.

This conception lives on as the current truth-functional analysis of the material implication, according to which it is possible to determine the truth value of a complex proposition on the basis of the truth values of its components alone. But this analysis comes at a cost: the *paradoxes* of the implication. (a) If P is false, then $P \rightarrow Q$ is true. (b) If Q is true, then $P \rightarrow Q$ is true. The paradoxes arise because the content of P and Q is irrelevant for the truth of $P \rightarrow Q$. So, P and Q are *not* really connected. But this connection is a requirement for ordinary or quotidian 'if…then' statements.

(3) A stronger notion goes back to Chrysippus (LS35A 6), which uses the criterion of 'cohesion' (cf. LS35B 4). A conditional $P \rightarrow Q$ is true if the negation of Q does not cohere, or is incompatible with, the truth of P. This can be analysed in terms of conjunction and negation:

$P \rightarrow Q$ is true iff denying P is incoherent with the truth of Q.
$P \rightarrow Q$ is false iff it is possible to deny Q and accept P.
$P \rightarrow Q$ is true iff Not: P and not Q.

(4) The Stoics reduce all syllogisms to five basic argument schemes, which they call 'indemonstrables' ($\dot{\alpha}\nu\alpha\pi\acute{o}\delta\epsilon\iota\kappa\tau o\iota$, *anapodeiktoi*) (LS36A):

(a) $P \rightarrow Q$, P, $\therefore$ Q, which is *modus ponens*;
(b) $P \rightarrow Q$, ~Q, $\therefore$ ~P, which is *modus tollens*;
(c) ~(P & Q), P, $\therefore$ ~Q;
(d) $P \lor Q$, P, $\therefore$ ~Q, which is a disjunctive syllogism, and so is;
(e) $P \lor Q$, ~P, $\therefore$ Q.