
Language in Synchronic / Diachronic Sense and Some Puzzles of the Philosophy of Language



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Abstract

Language can be modelled in various ways, highlighting either its social or systemic character. I assume that language is a normative phenomenon enabling speakers to communicate. At any particular time language is used, however, we are capable of determining a function which maps the expressions produced using this language to their meanings. In this contribution I propose a functional model of language in a synchronic sense. This model also solves various complications with ambivalence, etc. Then, I also propose a model of language in a diachronic sense as a function from possible worlds and time instants to languages in a synchronic sense. In this way, the intuitive idea that language changes is captured. Both models are constructed to be convenient tools mainly for the investigation of semantic properties of expressions of that language.

I. The distinction between synchronic and diachronic study of language

- the distinction was introduced by Ferdinand de Saussure in his *Course in General Linguistics* (1959)
- *synchronic* - the study of language at a given point in time (e.g. now)
- *diachronic* - the study of linguistic development through time
(chronos = time; dia- = across, through; syn- = together, with)
- the distinction is routinely used within linguistics (but this is not my topic here)
- however, the distinction seems to be a *taboo* within philosophy of language and philosophical logic

I. The distinction and some philosophical puzzles

- the distinction *language in synchronic / diachronic sense* pinpoints at a phenomenon which is evident and uncontroversial:
language changes in time; therefore, *what holds about a language in one moment of time need not to hold in some other moment*
- using the distinction one can easily dissolve several philosophical puzzles which stem from hidden equivocation of properties peculiar to each construal of language (that the notion of language is implicitly present in the puzzles is also usually unnoticed)
- one can also reject philosophical theories which purport to solve the same puzzles as artificial, being based on some not fundamental language phenomena

I. Content of the presentation

- in the part I., I am going to propose a model of language in both synchronic and diachronic sense which should be acceptable across the philosophical community
- I start with a discussion of some preliminary matters concerning language, meaning, etc.
- in the part II., I will analyse three exemplary puzzles where the distinction yields a natural solution
- some other puzzles are prepared in the appendices (if it will be enough time)

II. A model of language

III. Solving few philosophical puzzles

IV. Appendices

II. A model of language

II.1 Two construals of language

- as aptly elaborated by David Lewis (1983), there are two rivalling construals of language:
 - a. language is a *code*, i.e. *a function from expression to meanings* (equivalently: a class of <expression, meaning>-couples)
 - b. language is a social phenomenon – involving convention, etc.
- as regards b., I would prefer modelling language as a *normative system*; in my view, such system somehow *produces* or entitles language-codes
- it is, however, rather unclear what an explication of a normative system should be (what is a norm?)
- as regards a., a corresponding explication of language is *sufficient* for many purposes a theoretician has

II.2 Semantic scheme

- Frege/Church/Tichý-like semantic scheme involves ‘hyperintensional’ level of meanings and ‘sub-hyperintensional’ level of denotata:

expression E (of language L)

| *E expresses (mean) in L:*

structured meaning M of E in L

| *E denotes in L (M determines):*

set-theoretic denotatum of E in L

- (empirical) *reference* is beyond the reach of semantics in the sense that one must know also *w* and *t*
- *synonymy* in *L* = sameness of meanings in *L*; *equivalence* in *L* = congruence of meanings in *L*

II.3 Structured meanings

- structured meanings are advocated by many theoreticians in recent literature
- structured meanings have a complexity which correspond to the complexity of expressions and they are more fine-grained than mere set-theoretical objects such as classes, functions (as mappings), etc.; the meanings determine set-theoretic objects
- my background theory is Pavel Tichý's semantics having so-called constructions (aka algorithms) as meanings and possible world intensions or extensions as denotata (constructed by the constructions); see e.g. (Tichý 1988, 2004, or Raclavský 2009, Duží at al. 2010)

II.4 Language as code (gödelization and hierarchization)

- a (*linguistic*) *code* is a function from expressions to meanings, where meanings are explicated by this or that semantic theory
- this simple construal is not tenable as it stands; it has to be modified
- some modifications will only be briefly mentioned here
- by an expression of a language one naturally understand a visual or audial entity (note that admissible tokens of the expressions have to be specified); the generality of the consideration will not be diminished, if one think rather of *numeric codes* where (Gödelian) numbers play the role of expressions
- as suggested (though a bit indirectly) already by Russell, Tarski and Tichý, meanings form a hierarchy; consequently, one has to model a language by a *hierarchy of codes* (cf. Raclavský 2012)

II.5 Language as code and ambivalence

- *ambivalence* of natural language expressions goes, of course, far beyond pure homonymy (e.g. 'bank'), because expressions also switch meanings in distinct types of communicative situations (contexts)
- David Lewis (1983) in fact sketched a solution to any such ambivalence, viz. to associate with each expression not a sole meaning but a *sequence of meanings*
- elaborating the proposal, let the sequences be *partial*; this enables, *inter alia*, to have expressions with only one meaning
- moreover, some *positions* of sequences are occupied by meaning(s) used for (say) of 'factual' communication and some by meaning(s) used in the irony, etc. (even the 'hierarchical' alternative meanings are captured here)

II.6 Language in synchronic / diachronic sense (the model)

- the model of language hitherto sketched ignores diachronic aspect; here it is:
diachronic language DL is a function from circumstances (possible worlds *Ws*) and moments of times (*Ts*) to codes
- in a scheme, *DL* (in a given *w*): ----*L*----*L'*---->*t*
- note that language as such exchanges codes instantly; for example, language is continuously enriched by new proper names
- (of course, language as a normative system, in the sense b., is much more persistent during the flow of time than codes)
- realize that, strictly speaking, an expression has a meaning only in *L* or *L'*, not in *DL*; asking for meaning of *E* in *DL* amounts to asking for *E*'s meaning in the *value of DL*, i.e. in *L* or *L'*

II.7 Language in diachronic sense – and the variability of bases

- every function is defined over a *specific base*; a property, for instance, is defined over a definite collection of individuals (if this base is changed, the property will be different)
- one may thus object that the above model of *DL* is inadequate for *objectual base of language varies*; in other words, *L* and *L'* can have different bases
- of course, we cannot suggest that *DL* is a function having as values *L* and *L'* which are defined over different bases; the bases of *L* and *L'*, etc., has to be united
- consequently, the functional objects pertaining to *L* would be defined such that if a functional argument is originally missing in the base of *L*, then the function is undefined (gappy) for that object; in other words, an intuitively total predicate of *L* is now explicated as a partial predicate; it seems to be a bit strange but it is adequate
 - recall that we are in metalanguage position, discussing limited capabilities of *L*

III. Solving few philosophical puzzles

III.1 Puzzles concerning semantic properties - and language dependence

- as claimed above, various puzzles of philosophy of language which are related to proper names, descriptions and even general terms are *easily* solvable if the *hidden parameter of language* is examined
- the *semantic properties* the authors dispute (analyticity, a prioricity, rigidity, reference, intersubstitutivity, ...) have to be studied only in *relation to a fixed language* (in a synchronic sense)
- I will focus on two puzzles where the development of language is presupposed but it is left entirely unexamined

III.2 Identities between two introduced names - a confusion of L with L' (1/2)

- Quine (1962) and also Kripke (1971/1993, 1972/1980) raised a deep objection against Marcus' solution to the modal version of Morning Star/Evening Star puzzle: we can label Venus by "MS" and *then* by "ES" and our identity sentence "MS=ES" will be *contingent*, but not because "MS" and "ES" are hidden descriptions
- on my analysis, however:
 - a. "MS=ES" is *not true* in L because "ES" is not introduced so far, thus "ES" lacks meaning in L
 - b. "MS=ES" is *true* in L' because the two names co-denote
- note that on both readings, "MS=ES" is *not a contingent sentence* because one need not to investigate extralinguistic empirical matters to ascertain whether "MS=ES" is true in L or L' or not, the very *analysis* of the two languages suffices

III.3 Identities between two introduced names - a confusion of L with L' (2/2)

- the probable source of the confusion is that Quine thought about development of language (the change of the value of DL from L to L'), which led him to his non-analyticity appraisal of “MS=ES”, but he did not notice that he should study semantic properties in a fixed language as he did when he presupposed that MS and ES are two genuine proper names
- (if “MS=ES” is really contingent, it must be understood *as meaning something other* than Quine claimed: 1. it would be about coreference of two hidden but ordinary descriptions (Marcus’ disambiguation with help of an encyclopaedia: “The brightest celestial body of the morning sky = the brightest celestial body of the evening sky”), or 2. it would be about coreference of two hidden metalinguistic descriptions (Tichý’s 1981-like disambiguation: “The individual labelled /in L' / by ‘MS’ = the individual labelled /in L' / by ‘ES’ ”))

III.4 Necessary a posteriori puzzle – a confusion of *DL* with *L* (1/3)

- a priori/a posteriori = known without/with a recourse to the empirical evidence
- analytic/synthetic = (loosily) combining concepts necessarily/contingently
- examples of analytic a priori: all mathematical sentences
- examples of synthetic a posteriori: common empirical sentences
- Kripke (1971) defends necessary (i.e. analytic and true) a posteriori, e.g.:

“H = P”,

where H(esperus) and P(hosphoros) are proper names of Venus, not its descriptions

- (for the next slide: the usual way how to ascertain whether a sentence is a priori or a posteriori, etc., is to ask for its truth, i.e. for truth of its expanded form “T(s)”, where “s” is the original sentence and “T” is T-predicate)

III.5 Necessary a posteriori puzzle – a confusion of *DL* with *L* (2/3)

- however, it is important to ask *in which language* the investigated expression should have this or that semantic property such as “being an a posteriori truth”
- on my analysis, there are thus three readings/renderings of “H=P”:
 - a. “ ‘H=P’ is true in *L* ”, whereas one of H or P is meaningless or they label distinct objects, which was excluded in the beginning of our considerations; the sentence is not contingent and it is not true
 - b. “ ‘H=P’ is true in *L* ’ ”, whereas H and P name Venus, is *not contingent* and it is *true*; it is thus *necessary*; note that it is also *a priori*
 - c. “ ‘H=P’ is true in *DL* ” is *contingent* – the truth of c. is dependent on the value of *DL*; if it is *L*, ‘H=P’ is untrue, if it is *L*’, “H=P” is true; it is thus an *a posteriori* sentence because one must find by empirical investigation the value of *DL*

III.6 Necessary a posteriori puzzle – a confusion of *DL* with *L* (3/3)

- the source of the puzzle is a hidden confusion of *DL* with *L*
- when thinking about the analytic character of “*H=P*”, we are in the frame of *L*’ in which the two names co-denote (the knowledge of this is a priori)
- when thinking about a posterioricity, we think about circumstances of knowledge; one thus naturally reads “*H=P*” in the style of *c.*, imagining that it is an empirical discovery that *H* is the same object as *P*, or that *H* names the same object as *P*
- note that the very same confusion about language is behind Kripke’s claim that “Heat = molecular motion” is necessary a posteriori

III.6 Analytic/synthetic distinction puzzle – another confusion of *DL* with *L*

- Quine (1951) insisted on “Bachelor = unmarried man” being not analytic
- we understand Quine as being wrong because *in any value of DL* (i.e. in *L* or *L'*, etc.) the sentence is sharply analytic or non-analytic
- Quine did not realize that to ask for semantic properties one must focus on a fixed language code (*L* or *L'*, ...), not on *DL* as a whole
- it is a trivial truth that in *DL* as a whole the sentence “Bachelor = unmarried man” is not analytic because *there is a value of DL* (say *L''''* in the very far future) in which it is not analytic
- (since it is a truism, this is why Quine never felt wrong; but Quine did not noticed that he took too large perspective on language – most of us look on language as *L* or its close relatives such as *L'*, in which the sentence is analytic, but not *L''''*)

III. Concluding

- I have proposed a model of language in diachronic sense which is not at odds with a model of language in synchronic sense
- I have offered diagnostic investigations of some puzzles based on the unnoticed confusion of semantic properties related to language in synchronic and diachronic sense; the solution to the puzzles sound natural
- realize once more that to ask for a *semantic property of an expression* gives a proper sense *only with regards to language in synchronic sense*

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IV. Appendices

IV.1 Baptizing past and future individuals – and change of base

- changes of a base are usually not involved when baptizing past individuals (Gareth Evans' "Julius"-“the inventor of zip”) or future individuals (e.g. David Kaplan's “Newman 1”)
- (setting aside here that philosophers often claim that such individuals do not actually exist: they probably confuse the notion of individuals – to which no nontrivial notion of existence is really applicable – with the notion of individual concepts which can be filled in the course of events by this or that individual)
- if the baptizing act is successful, an individual X is named by the name N which is meaningless in L but meaningful in L' to which we have moved thanks to the successful baptizing act
- if the baptizing act is successful, then there is a reference-fixing description which has a meaning and denotation over base B of L ; thus B must contain the individual X in question (despite that the language L to which the reference-fixing descriptions belongs, does not have a proper name of X)

IV.2 General terms and modality

- general terms (“tiger”, “pencil”, “the colour of sky”) are often discussed on a par with proper names, assuming that they denote directly as proper names do (of course, except examples such as “the colour of sky”); consequently, they are classified as rigid designators (*cf.* Kripke 1972/1980)
- the alleged ‘transparent’ semantic character of general terms (esp. natural kind terms) is usually illustrated by considering future circumstances on which tigers are not black-striped (etc.) but they are still called “tigers”
- but: from a general viewpoint, anything can be called “tiger” if English will evolve conveniently; the future English will thus utilize a distinct code *L'* in which “tiger” means something other than in *L* -Kripkeans notwithstanding
- if the meaning (or denotation) of “tiger”, and the like, is not definable, it must be logically primitive, which is a very unusual construal

IV.3 Standard meter contingent a priori puzzle - a confusion of L with DL

- S1: “The standard meter rod S is 1 meter long in T_0 ”
 is *contingent* (the length of S could be different in T_0) and *a priori*
- Kripke (1983) is mistaken for more reasons
- within L , “the length of S in T_0 ” may serve as reference-fixing description, but when the meter is successfully introduced, we move from L to L' in which the description serve as a definiens:
 /the length, in w at t of/ 1 meter =_{df} the length [in, say, inches] of S in w at T_0
- in W' (at T_0) the length of S could be different than it was in the actual world but this does affect the *analyticity* (in L') of the definition and claims such as S1 which are based on it