In What Sense can Statements about Languages be True?

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Abstract: The article considers descriptive statements about languages and language phenomena and seeks to determine how such statements can be "true". Descriptive statements about languages are considered from the points of view of the correspondence and coherence theories of truth and from the point of view of hypothetico-deductive testing. It is argued that descriptive statements about languages are rationally discussable interpretations *disciplined by what we can observe within a given paradigm*, and that issues of truth and issues of empirical testing should be distinguished.

Keywords: Descriptive statements, languages, truth, theoretical concepts and statements, hypothetico-deductivism, correspondence theory, coherence theory, speech phenomena, black box approaches, interpretation

Linguistics and some branches of philosophy abound in descriptive statements, i.e. statements which purport to express facts about languages; statements which describe languages or parts of languages. For example, "*abandon*…is an activity verb [in English]" (Quirk et al. 1972, 95); "The perfect [in English] is used with an indication of some length of time to denote what has lasted so long and is still" (Jespersen 1979, 241); Roach (2009, 103) describes the English phoneme, /d/, as consisting of the distinctive features /alveolar, plosive, lenis/; Austin described the verb *bet* in English as a "performative verb" (1962, 7); in Russian "a negative infinitive after a positive verb is generally imperfective" (Henry 1963, 78), etc. Dictionaries and grammars, practical or academic, are full of such (explicit or implicit) descriptive statements.

Descriptive statements of the above sort are obviously intended to be "about" an aspect of the real world and to be veridical. Their truth must depend on the meaning of the terms they contain and the empirical validity of the constructs they contain. One can reasonably ask what it is for a statement of the sort in question to be true, but the answer is not straightforward.

I argued earlier (in *Organon F*, 2010/2) that linguistic descriptive statements should be viewed as a) hypotheses (rather than synthetic, categorical statements) and b) as representations of constructs and relations in models, where the constructs, relations and models are heavily "theory-laden". That is, the interpretation of models and their components is possible only by reference to complex, non-empirical, classificatory concepts (such as "phoneme", "morphological relation", "hyperonym", etc.). The above examples clearly cannot be understood without a knowledge of both the claimed structure of the language in question and of a number of theoretical ideas. Grammatical notions such as "perfect" or "negative infinitive" must be interpreted in the context of particular languages and the other relevant descriptive categories in them, and theoretical notions applicable to any language, such as "phoneme" or "performative", must be interpreted to make sense of the statements containing those terms. Without that information, it is impossible to know what the hypotheses mean or to what they refer.

Now, some hypotheses are unlikely ever to be refuted. All descriptions of English contain a "/p/" phoneme or similar unit. It is unlikely that anyone would deny that "rabbit" is a word in English. Nevertheless, understanding statements referring to /p/ or "rabbit" requires understanding of the concepts "phoneme" and "word". When we come to more controversial cases such as the diphthong [aj] in English or the expressions, "shipyard", "race course" etc., there are different views on whether we need one phoneme (/ai/) or two (/a + i/) to account for the phenomena and on whether "shipyard" and "race course" are one word each or two words each. The different solutions obviously depend on how we interpret the terms, "phoneme" and "word", and will have an effect on other parts of the description. For example, in both cases, if we accept that two units are involved, we will also need to set up combinatory relations between the components along with the "positions" they occupy. The "truth" of statements containing such terms cannot be a simple relation between a statement and some real-world state of affairs.

As noted in my earlier paper, many linguists have, consciously or otherwise, very strong ontological commitment to the existence of real-world correlates of the constructs they set up. For some, those correlates "exist" as the common properties of speech communities. Saussure, for example, declared that languages exist (perfectly) "only in the collectivity" (1972, 38 and 112). For others, they exist as purported constituents of speakers' brains (for example, Malmberg 1967, 23; Aitcheson 1994; Lamb 1999; Pulvemüller 2005). Only a minority of linguists regard linguistic constructs and relations as realities only in the linguist's description and having an explanatory function with respect to observables (Mulder 1996: Mulder and Rastall 2005). The latter group of linguists has a much lower, or even non-existent, commitment to the actual existence of any real-world correlates of descriptive models.

For all groups of linguists, however, the question of "truth" arises at some point.

The long-standing view of most (if not, all) linguists has been that linguistics is a "science" and have interpreted that to mean (at least) that its statements about languages and their components are empirical, and that they refer to, and stand or fall by, the observable facts of speech behaviour (and are not influenced by prejudice or aesthetic taste).

It is important to note that a few linguists, notably Mulder (1975, 1989), have pointed out the non-empirical nature of statements in *theories* whose purpose is to enable descriptions to be made. For example, "a phoneme is a simultaneous bundle of distinctive features in phonology occupying a single position in the chain" is a definition with applicability in description (given an adequate methodology) but containing no empirical terms. In fact, terms such as "distinctive feature", "position", "chain" themselves require further definition and ways of applying them in real instances of description. This paper is not concerned with statements of that sort. Such statements may be consistent in a given theory and useful in analysis, but they cannot be "true" of the real world. Here we are concerned with statements which purport to tell us about the nature of real-world linguistic communication.

Many linguists have explicitly held either that linguistics is characterised by its inductive approach (a popular view before about 1965 and most associated with Bloomfield 1935 and his followers, especially in America where positivism was very strong) or, more recently, by

its hypothetico-deductivism (following the accounts of such philoso-phers of science as Kneale (quoted by Shaumjan 1971), Hempel (quoted by Lockwood 1972), or Popper (quoted by Sampson 1975 and by Mul-der 1996 according to preference)). As a result of this and the above-mentioned strong ontological commitment, many linguists seem to be committed to a strong form of a correspondence theory of truth. In fact, in some approaches, the distinction of construct and phenomenon is ignored and there is alleged isomorphism between constructs and real-world (but unobservable) entities, and between structural rela-tions in constructs and relations in real-world entities. Chomsky and Halle (1968, 3) assert that "[W]e use the term "grammar" with system-atic ambiguity. On the one hand, the term refers to the explicit theory constructed by the linguist and proposed as a description of the native speaker's competence.[1] On the other hand,….[it refers]…to this compe-tence itself." Fromkin and Rodman (2003, 13) also deliberately ignore the *construct - phenomenon* distinction.[2] It is not clear how many linguists actually accept this philosophically unsound, but influential, view.

Very few linguists have adopted a coherence theory of truth. The sole example I know of is Hjelmslev (1966, 19) and his position can be established only by implication. His "principle of empiricism" asserts that (linguistic) descriptions should be consistent, exhaustive, and as simple as possible. Confrontation of linguistic claims with observable phenomena is not mentioned in his approach. Many linguists have found his view of "empiricism" strange (or a mis-nomer) for that rea-son.[3] Hjelmslev rejected the idea of the existence of a real-world reality with which linguistic constructs might be in correspondence, and this may have led him to the view that the linguist's job was to provide a theoretically motivated understanding of linguistic systems and pro-cesses. However, that does not address the problem of establishing the consistency of constructs with real-world speech events. In effect, his "projection" of constructs onto speech phenomena (in order to account for them) introduces consistency with factual evidence by the back door

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[1] Here, as in many approaches, the writers aim to describe the "language" or "language competence" of speakers rather than their observable speech behaviour. In such approaches, observable speech acts are seen as a way of testing claims about the language system – see below.

[2] Their position is criticised by Rastall (2006).

[3] For a review and discussion, see Rastall (1983).

without an explicit criterion of an acceptable "projection". (Occasionally, researchers in "applied linguistics" take the pragmatic view that constructs are accepted insofar as they are useful, but their interests are plainly not related to central areas of linguistic theory.)

It should be obvious that a claim that statement, s, truly describes (some part of) language, L, can only make sense and be tested, if we can separately identify language, L, and its parts independently of the statement, s. However, as we have seen, there can be very different views on what that language, L, is.

It would seem that those with a strong ontological commitment to real-world entities corresponding to descriptive constructs should also be committed to empirical testing through the comparison of statements containing those constructs and real-world entities. The problem is, of course, that the said real-world entities are not observable. Thus, if one accepts a correspondence theory of truth in linguistics, it would be reasonable to ask "correspondence with what?", i.e. what is the language, L, which statement, s, purportedly describes? One would need to know what a linguistic statement or set of statements (adding up to a whole description) corresponded to in the real world. One would want to know, further, how the correspondence is established.

Here there are clearly different possibilities. Linguists with no ontological commitment to the actual existence of linguistic units and relations in the social world, or in the minds/brains of speakers, can only set up a model corresponding with features of observable speech acts via rules linking models to observables and tests on them. That is Mulder's view. He explicitly rejects the idea of any "absolute truth" in linguistics and prefers to speak of the (relative) "validity" of descriptive statements (= hypotheses corroborated but potentially refutable). In his approach, linguistic statements have an explanatory function in relation to observable speech acts and, following Popper, are upheld (corroborated) until refuted (Mulder 1995 and 1996). This relation of explanation is complicated by the facts that one requires some theoretical apparatus to identify relevant features of speech acts (as noted above) and that linguistic descriptive statements can be interpreted only in relation to some arbitrarily (but appropriately) selected theory (as Hjelmslev 1953, 9 put it). However, it should be clear that such a (virtually) nominalist approach is not a "correspondence theory" in

the sense of a hypothetical isomorphism of construct and (unobservable) real-world state of affairs.

In fact, the observables which linguists deal with are generally rather distant from real acts of speaking. The speech data are normally viewed from a selected point of view (e.g. their communicative function), "idealised" to exclude errors, false starts, incomplete utterances, etc., include artificially constructed "potential" utterances, and are often *comparisons* between similar but differentiat ed utterances. Most obviously of all, acts of speaking are manifested as continuous transmissions of energy and continuous wave forms in the acoustic data, whereas all descriptions of speech deal in discrete (and static) perceptual units. In other words, some element of theory is already involved in the selection and manipulation of the speech phenomena – they are not "raw facts".

Other linguists also want at least some connection between descriptive constructs and real-world events as a guarantee of empiricism, although they may pay less attention to the role of theory in the process. In *the girl ate an apple*, there is alleged correspondence of the "words" in the sentence with real world units, and also of the grammatical constructions **(article – noun, subject – verb, verb – direct object**), and of any features of intonation and stress, as well as the "sentence" as a whole. Here the "truth-bearers" (David 2009, *online*) are the constructs and the statements about English containing them, but it is unclear what the "truth-makers" might be (i.e. that in the real world which allegedly "corresponds" to the constructs). Our experience of school and language learning can lead us to take a lot for granted in our thinking about the nature of actual speech acts and in identifying a sentence such as *the girl ate an apple* as "evidence".

If the claim is to account for acts of speaking, then considerable interpretation of the speech phenomena (and abstraction from them) will be needed before any correspondence can be recognised. (We must identify continuous (and complex) sound waves as instances of phonetic and phonological units in "segments" on the basis of communicational function rather than physical features; groups of sounds and their delimitations; sounds and groups of sounds as instances of the forms of linguistic signs; the sequences of forms of signs and their inter-relations; the "non-discrete" features of stress and intonation; the

meanings and pragmatic functions to be attached to groups and intonation, for example).

If, however, the correspondence is *not* with speech events, then we are left with a conceptualist correspondence either with unreal entities (hypostatised universals) or with unobservables (alleged mental structures, themselves in need of modelling), or characteristics of the speech of a community, i.e. the construct created by the linguistic description. In either case, we cannot be dealing with correspondence with an observable real-world entity. If so, then the correspondence view of truth cannot be relevant here, because there is no possibility of a comparison to establish the correspondence of *s* with *L*.

Many linguists faced with this problem take the "black-box" approach (e.g. Chomsky 1965, Lamb 1999, Fromkin and Rodman 2003, and many others). That is, they assert that correspondence of constructs (i.e. analogues of speech events or parts of speech events proposed as logical consequences of more abstract models) with observables can be taken to establish a correspondence with an unobservable system causally responsible for those observables. Descriptive statements will be corroborated or falsified through the confrontation of constructs referred to in the statements with observable speech phenomena. Such a view, of course, involves a confusion of a necessary with a sufficient condition for correspondence. Where the claim is that a linguistic description corresponds to mental or to brain events, there is little, or no, evidence from direct testing of the model. As Pulvemüller rather coyly puts it, "[a] closer look at the actual empirical data so far indicates that a clear correlation between language phenomena (= constructs?) and electrical connections [in the brain] are not easy to find" (2005, 2).

Even if the correspondence is between the analogue construct (output of the linguist's model black box) and the speech event, we are still left with the fact that speech events are not directly accessible, as noted above. Indeed, it is the function of linguistic models to help us understand speech events. That is, there can be no test of "correspondence", if the characteristics of one element of the correspondence relation (the real world entities) are unknown.[4] In general, the characterisation of speech events is not a matter of "recording raw data". As Austin (1950)

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[4] One might note also that "analogues" of speech events consist only of certain aspects of a speech event (e.g. grammatical or phonological ones). They do not model speech events in their communicational totality.

and, later, Quine (1987) observed there is a good deal of "projection of language onto the world" for the sake of correspondence. In the case of linguistics, that projection includes the meaning of the predicates of linguistic theory. In one's rush to investigate the "nature" of language or "how languages work", it is all too easy to forget or underestimate the need for definition of terms. Popper's (1972, 308) rejection of the discussion of word meanings and emphasis on "facts" (in science) overlook the need for *meaningful* theory. In linguistics, theory pervades every statement and there are no "facts" without the prism of some theory or other.

This raises a more general difficulty with any correspondence theory of truth in linguistic statements, namely – as we saw earlier – that linguistic constructs are projected onto *classes* of similar speech events through the medium of our theories and descriptive models. That is hardly a claim of point by point isomorphism. Rather, it is a claim that speech events, in given respects, can be understood through a process of rational interpretation, which is limited by the necessity of imposing an arbitrarily selected point of view on the phenomena, which are grouped into impressionistically similar classes.[5] One might suggest that this form of rational interpretation, *consistent with, and disciplined by, what we can observe*, is typical of "anthropocentric" sciences. Furthermore, it suggests that empirical testing of hypotheses and claims of correspondence must be distinguished. Hypothetico-deductivism and a correspondence theory of truth do not have to go hand in hand.[6] We can test for consistency with whatever facts are available without claiming correspondence with anything. A claim of correspondence with a putative unobservable reality would require separate justification.[7]

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[5] No two utterances are ever identical.

[6] Popper's philosophy of science (e.g. 1972) advocates a strong form of commonsense realism combining hypothetico-deductivism and a correspondence theory of truth (e.g. pp. 44-46). Although he does not claim a *necessary* connection, he does not consider whether they are separate issues.

[7] This point raises another. Linguists typically confuse the construction of an explanatory or descriptive model with an account of the mental (causal) processes of speech generation and that the description of a language system is an account of all speakers' cognitive processes in speech behavior. This is not the place to consider those fallacies, but they are discussed in Rastall (2010).

So, in what sense can a linguistic statement or body of statements be "true" or a linguistic construct truly represent reality? The conclusion here is (like Mulder's) that "correspondence" is better avoided and the claim to "truth" be expressed as "validity of an account within a given paradigm for a particular type of phenomena viewed from the point of view of that paradigm". Quine (1960, 24) expressed it thus:

> When it makes sense to apply "true" is to a sentence couched in the terms of a given theory and seen from within the theory, complete with its posited reality.

I assume Quine means by "its posited reality" those real-world phenomena that are identified and accounted for by means of the theory. That maintains a clear empiricism, but one tempered by the realisation that phenomena *per se* are unknowable, and that some theory is needed just to point out and roughly classify them. This might be thought of as a "weak" empirical theory of truth.

Linguistic statements and constructs can be empirical – i.e. they can be confronted with evidence and either confirmed or refuted at least within the framework of a given viewpoint – but that does not imply that linguists must be committed to a strong version of the correspondence theory of truth. In fact, we can see that arriving at an interpretation of the relevant observables using a given theory implies a strong measure of *coherence* between the statements of the description and between the descriptive statements and the theory which provides the framework of ideas.

However, the epistemological question of "how do we know that a statement in linguistics is true/valid or false/invalid?" remains. Above, we are saying that a statement can be true or false within a paradigm; i.e. that there is so much theory and classification of the data or comparisons of data that it is difficult to disentangle primary phenomena from *perspectives on* phenomena. Statements can be empirically refuted or corroborated, but only within a certain point of view. That view certainly makes sense in a number of controversial cases, such as whether morphological phenomena (such as number endings attached to nouns or tense endings attached to verbs) should be described as processes or as static systems of relations, or whether the forms of

nominals in languages such as Latin or Russian are determined by case function or syntactic role.[8] It is the theoretical perspective which decides the linguist's answer to such questions – not reference to the data, which can be effectively described either way in each example.

Our conclusion may not change linguistic descriptive statements, but it certainly affects how we think of them. In particular, we may come to the conclusion that our descriptions of human behaviours, such as speech, are acts of rationally discussable interpretation. That is a rather dispiriting conclusion because it points to significant limitations on our understanding of social reality. This paper is limited to the discussion of linguistic descriptive statements with which the author is familiar, but the reader may wish to consider to what extent the issues discussed here are found in other sciences.

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[8]   If we take case functions to be fundamental in Latin or Russian, then syntactic positions such as "subject" or "object" will be determined by case selection (i.e. nominative or accusative). If we take positions such as "subject" and "object" to be fundamental, then case forms (nominative and accusative) will be determined by syntactic considerations.

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