The Meaning of State in Grammar

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1984, 2015

The nice diagram to the left is stolen from the Internet. It suggests at least that a few people have wondered about the meaning of "state" in natural languages. It turns out to be a complex topic (like so much in the study of language) when you think past merely memorizing a fairly arbitrary list of categories. "State" has rather philosophical implications.

The material below won't solve too many puzzles about the nature of grammatical state, but it will raise a number of interesting questions, at least as the concept applies to English. This material is extracted from a larger document on Grammatical Agency, already put in the public domain (PDFs at http://www.academia.edu/11215106/Grammatical_Agency and also http://thormay.net/lxesl/Grammatical%20Agency.pdf). It is offered purely on an as-is basis for those who are delving into the idea of State. The analysis constitutes part of PhD research which was discontinued in the early 1980s. I therefore hesitated to make it available at all in such an early draft form, but have decided that since I have no intention of refining and developing the arguments further, it may at least serve as a cue to others.

The reason for extracting a study of State from the larger Grammatical Agency document is that other researchers may be approaching Grammatical State independently. However, note that the analysis makes extensive use of a type of semantic feature analysis which, although it may or may not be defensible within a particular model context, is at least fairly clear about its claims. A close look at this feature analysis should show that State, as with many essentially semantic concepts, is not really a discrete construct, but rather part of a compositional

continuum. The nature of this continuum emerges much more clearly in the extended paper on Grammatical Agency.

Editorial note: Apologies for the quality of the old photocopied pages inserted below. The page numbers on them relate only to the original work in a larger document.

STATE

Scientific philosophies, like religions, tend to be working hypotheses about a larger order of things, and linguists (along with the rest of humanity) are apt to pick an off-the-shelf model which seems reasonable so they can get on with the finer details of living with a minimum of fuss. A difficulty with unexamined assumptions however (unlike factory made clothes) is that they assume a form which is idiosyncratic to their user: the concept-labels may have wide currency but their substance fluctuates wildly. Nowhere is this more evident than in the notions of STATE and CHANGE of STATE. This study is not able to offer a definitive definition of *state* (I'm as idiosyncratic as everyone else) but no survey of agency can avoid coming to terms with interpretations of stativity in the literature.

The term STATE in linguistics has been used:

- as an existential concept with linguistic consequences,[14]

- as a label for various semantic and/or syntactic functions,[15]

- as a condition identified by certain syntactic forms,[16]

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[14] Givon's (1979) arguments from perception (outline below, p.34) are a good example of *state* justified as an existential concept.

[15] Chafe (1970) uses *state* as a "selectional unit" to control the collocability of "patient-nouns"; (see p. 37 below).

[16] Givon (1974:4) talks about "Stative Predicates" like *Mary lose her balance*. The defining feature in this particular instance seems to be that "the subject...has no control over the process in which he/she is involved". For me some change of state is implicit in Givon's example, but he uses the *stative* label in that article consistently within his definition.

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  - as a condition descriptive of certain lexical forms,
   or even word classes.[17]

  Accordingly, the descriptive label, *change of state*, which has a defining status in all discussions of agency and causation, is hopelessly inexplicit about what might actually be "changing".

  Givon (1979:346) makes an attempt to anchor language to the perceptual dependencies of the universe we construct. Perceptual discrimination is a time-based phenomenon: "...A recurring experience eventually loses its perceptual saliency, while a new, surprising experience has a higher perceptual saliency... Thus the sense data confronting the organism in its new ("moved-toward") environment as it moves onward are judged to be more frequent [than in the 'old' location] only because they have a higher perceptual saliency".

  Since the movement which generates changes in perceptual salience is typically caused by a volitional agent, agency is seen by Givon to have deeply affected the structure of language, or at least its logical form, through the coding of 'new' and 'old' information (perceptions).

  If our *synchronic* perceptual discriminations are structured in the three spatial dimensions, then discriminations centred on the time axis must take account of a prior spatial condition (state) and a subsequent condition, or the stability of that initial state. It is fairly common to ascribe word classes various roles in forms of this equation.

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[17] 'Know' is said to be a stative verb. Adjectives are often considered to be stative in the sense that they (usually) describe a condition rather than delineate a process. See also the characterization by Quirk (quoted p.36, below) of nouns and adjectives as 'stative'.

"The *noun* universe of languages", suggests Givon (1979:321), "at its core, codes 'more concrete' entities, that is, those which exist in space and time." Givon recognizes though that "...the number of points in time that must elapse before an entity may be judged 'stable'...may vary enormously from one context to another."

"On the other side of the lexical continuum, we find *verbs*, which most commonly map actions or events. That is, they most commonly map entities that are 'less concrete' than nouns, that have most typically only *existence in time*."

"...*Adjectives* have a reduced or aborted tense-aspect morphology, as compared to verbs...Dixon (1972) has noted that the most likely qualities to be lexicalized as adjectives are the more stable, permanent qualities, such as *length, width, gender, colour, texture*, etc. ...Less durable qualities such as *hot-cold, broken, angry, happy, sad, undressed*, etc. [may] be expressed as verbs."

Other scholars have also assumed the role assignment of word classes into stative-types,[18] although usually without Givon's ontological argument. Thus Quirk and Greenbaum (1973:21) propose the following paradigm:

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[18] This discussion, in fact, reaches back to medieval grammarians and beyond. In the 14th Century the Modistae borrowed from the metaphysics of their time, conceiving of the world as comprising two primary elements, that of permanence and that of becoming (*habitus* and *fieri*). The *partes orationis* which express permanence and stability are the *nomen* and *pronomen*, while the *verbum* and *participium* express the concept of becoming. However, Bursill-Hall warns that for the Modistae this was largely a terminological distinction (...just as modern linguists borrow their metaphors from contemporary science) and not to be confused with reality. I suspect that such metaphors *are* our reality, in every age. (See Bursill-Hall, G.L. *Speculative Grammars of the Middle Ages*, p.39, 1971).

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Stative	Dynamic
Noun	Verb
Adjective	Adverb

There are (at least) two kinds of evaluation, that can be applied to the labelling of word classes in this manner:

(a) How usefully or comprehensively does it delineate all of the items in the lexicon?

(b) What does it finally explain about the interpretation or structuring of grammatical strings and constraints thereof?

A brief response to those questions might be not very well and not very much, but we will be in a better position to judge this after more detailed analysis. What can be said immediately is that perceptual discrimination (that pertaining to space and time), although it permeates language, has long been supplemented in the lexicon by a galaxy of cognitive and experential distinctions that are linked to 'state' or 'change of state' (if at all) only by analogy, custom, or contingent association. The language in which this paper is written, for example, has little intrinsic relationship to space-time, hence 'state'.

One of the difficulties with the concept of STATE lies in establishing its level of abstraction in a particular analysis. Givon used *concreteness* as a measure of stativity, yet I have not seen it suggested that the feature [+ concrete] may be substituted by the feature [+ stative] : [stative], as we know, is a feature attached to verbs (or adjectives) characterizing their effect on the behaviour of a noun. Nor does a change of state (normally) imply a change in concreteness (although this is a complex notion itself). There is severe conceptual confusion here (of the order of dividing apples by

bananas). An attempt could be made to resolve these difficulties by assigning *state*, *event*, *action*, etc. the status of meta-features which characterize not individual lexical items but interpretative strings in the grammar. However this is the subject for a subsequent, more analytic article.

Menzel (1975:57) seemed to sense some of the confusion surrounding *state* when he contrasted it with the notion of *property*. A *state*, he suggested, is not part of an entity, is of short or uncertain duration, and need not have an entity reference (e.g. *It's hot*). A *property*, on the other hand, is necessarily part of an entity, is a-temporal, and is expressed by adjectives and generic sentences.

Chafe (1970) made extensive use of *state* as a "selectional unit", along with *process*, *action* and *ambient*. The role of a selectional unit in Chafe's model is to characterize the collocability of nouns (as *agents*, *patients*, etc.) with their matrix verbs (which carry the selectional unit). *States* and *processes* are accompanied by *patients*, *actions* by *agents*. A verb can simultaneously be marked, say, *process* selecting a *patient*-noun, and *action*, selecting an *agent*-noun (e.g.54. *Michael dried the wood*). The unit *state*, however, restricts a verb to selecting a *patient*-noun (e.g. 55. *The wood is dry*), or expressing an *ambient state* (e.g. 56. *It's hot*). (Examples from Chafe 1970:104). Note that adjectives for Chafe are "root verbs" for which the copula merely carries tense and aspect.

The kind of analysis proposed by Chafe has a certain descriptive appeal with fairly concrete and uncomplicated language. The idea of semantic (i.e. interpretative) selectional units is probably sound. But the difficulty, as always, comes with the analyzability of the categories themselves. Chafe is only explicit in this regard to the
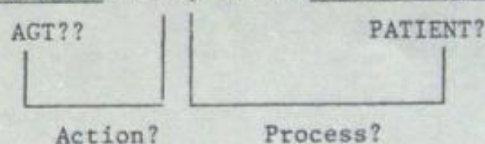
extent of "paraphrase tests". States are distinguished from non-states by the fact that the latter answer the questions "what happened?", "what is happening?" ...etc. Process involves a relation between *patient*-noun and a *state* by expressing "what happened to N". But *action* (i.e. involving an agent) has "...nothing to do with state or change of state"; *action* expresses "what N did". Apart from the pertinent question of what such test-labelling buys for a model of grammar, we run into immediate difficulty when it is applied to language that is a little abstract:
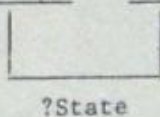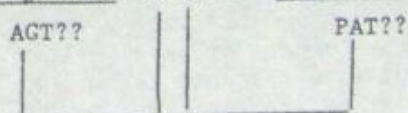
57. *The unit, state, restricts a verb.*

<pre>
       AGT?   PATIENT?
        | | | |
        |_____| |_____|
     Action?   Process?
</pre>
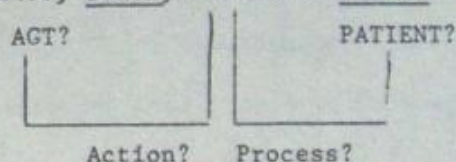
58. *The term incorporates a notion of change.*

<pre>
     AGT?? | | PATIENT?
      |_____| |_____|
     Action?   Process?
</pre>

59. *The concept is confused.*

<pre>
        |_____|
          ?State
</pre>

60. *Linguists confuse this concept*

<pre>
     AGT?? | | PAT??
      |_____| |_____|
</pre>

Chafe's paraphrase questions may only be applied to sentences of this kind by a process of metaphor or analogy with a success that

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is sometimes more, sometimes less tenuous. Our ability to recognize the metaphor is scarcely a matter of linguistic universals; rather it relates to cultural conditioning. The content of sentences 57, 58, 59, 60 is essentially a-temporal (though it can be given a temporal context). Although we map this world of cognitive abstractions with familiar names, the incontrovertible logic of space/time and "causation" is likely to betray us. In sentence 60, for example, it is not (necessarily) the *concept* which is confused, but the *linguists* who use it.

The particular limits of models constructed by Chafe, Givon and others are not terribly important. What is significant is that their categories all make some claim to universality by exploiting a uniformity of biological process (notably perception) and space-time constructs. It is certainly easy to exemplify such universal categories. My reservation is that, although they may be adapted by analogy to even abstract situations, they go nowhere near determining (in any useful generative sense) the interpretive-grammatical range of all languages, or of a single language. The limits of category interpretation cannot be dissolved, of course, by even the most detailed feature analysis. We can only hope to render the generalizations less gross, and the model more adaptable.

Notions of state have been discussed in some detail because they represent the base-line for what volitional, or otherwise agentive behaviour, is supposed change. The actual number of verbs which preclude a modality of change, which are resolutely 'stative', turns out to be very small. Stative verbs have been restrictively defined as those verbs not taking the progressive aspect; (see Quirk, 1973:15; Lakoff, 1970, et al.). The verb invariably quoted in this respect is *know*, and

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the list usually stops there. In any case the avoidance of progressives
is not limited to state verbs, but is also characteristic of "achieve-
ment" verbs like *find* (J. Anderson, 1977:28, who cites Mellema, 1974
and Vendler, 1957).

61. *Judy found a gem and Horace did so too.*

62. **Judy is finding a gem.*

Another test of stative verbs has been their supposed inability
to collocate with *manner* adjuncts (e.g. Quirk, 1973:220). Unfortunately
manner itself is not a unified concept. To the extent that it ascribes
overt action to its referent, stativity is denied. Such adjuncts may
best be seen as clarifying the status of sentences in particular
instances rather than controlling the subcategorization of any useful
class of verbs.

63. *He owns it { *skillfully / reluctantly }.*

Quirk uses *skillfully* to illustrate the stativity of *own*, yet the
manner adverb *reluctantly* is a possible (if awkward) adjunct which
gives a less stative caste to the verb. Even *know* shifts its meaning
subtly in the company of adverbials like *consciously* or *indifferently*.

Perhaps the most useful thing to establish is that *state* is a
meta-concept independent of any lexical set. The evidence so far
suggests this, and all other examples of "stative verbs" in the liter-
ature seem to confirm it. Thus the set, *weigh, cost, measure* (Chafe
1970:157) may be stative in one context,

64. *The loaf weighed 340 grams.*

but active[19] in another,

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[19] This 'active' characterization depends upon the model however. Thus
Nilsen suggests that the object-noun with these verbs undergoes "no
change of state"; (see Nilsen, D., 1973:149).

65. *Janice weighed the loaf.*

The same is true of *like, know, understand,* etc., especially as
they are modified in complex verb phrases (...*getting to like,*
...*coming to know*). If, as Chafe suggests, adjectives and prepos-
itions are "root verbs" whose tense and aspect are carried by BE,
then surely BE plus COME can modify their stative condition. Note
also that the subjective nature of these adjectival "states" is
acknowledged by a whole range of sensory verbs:

$$\left.\begin{array}{l}look \\ feel \\ taste \\ seem\end{array}\right\} hot...etc.$$

Finally, it is informative to assemble the various kinds of verbs and
"quasi-verbs" that have been marked stative in some context, just to
see what they have in common semantically (See Table 'C', p.42). It is a
motley collection. A little reflection should also show that there
is not much evidence to sustain these items as a syntactic class. It
seems that *state,* far from being a precise defining primitive in the
grammar, is a rather generalized descriptive label used in the struggle
to distinguish past from present, red from blue, here from there, and A
from Z.

Those meta-concepts, *action* and *event*, which mark a *transition
of states* (and are therefore important to a study of agency) have most
complex syntactic consequences and will be reserved for another analysis.
The next step in laying the goundword for our interpretative grammar is
to make explicit the *relational features,* the interpretative links,
between verb-tokens and referents which they bind.

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TABLE 'C'

	Ambient	Specific	Subjective	Objective	Durative	Sentient Patient	Volitional Source	Potent Source	Locative Reference
BE + hot	+	+	+	+	+	+/-	?	?	-
BE + on	-	+	-	+	+	+/-	?	?	+
like	-	+	+	-	+	+	-	-	-
know	-	+	+	-	1	+	(-)	-	-
(?) remain	-	+	-	+	+	+/-	+/-	-	+/-
feel	-	+	+	-	+	+	-	-	-
weigh	-	+	(-)	+	+	+/-	-	-	-
own	-	+	+	-	+	+	+/-	-	+/-

ENTITIES AND RELATIONSHIPS

It has just been argued that *state* in natural languages, is not easily designated by a consistent set of other labels (..."duration" perhaps, but duration of what in what universe?...). Rather it is a sort of holding category, a foothold in the mind sometimes as arbitrary as an X in algebra.

With a little use these footholds are apt to acquire names and become "entities"? Our brains have quite definite predispositions in this respect. We take cognizance of adjacent perceived angles to construct

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three-dimensional sets. On the other hand we do not associate temperature differentials in any continuous and coherent manner. Certain types of film are able to do this, translating into "visible" contours a dimension which is only crudely visible to our senses. For other creatures "entities" might well be defined by temperature differentials: it would be a universe with very different constants, signifiers and relationships.

Entities are assumed by the conventions and signs of natural languages, just as they are assumed by the rules and institutions of human societies. Anthropologists, like Claude Levi-Strauss (drawing inspiration from the semiologist, Barthés) have sought universal patterns by violating the unity of labelled cultural entities (with their implicit antitheses) and proposing that they are ultimately defined (i.e. 'explained') as bundles of relationships - relationships with internal combinatorial possibilities and a predictable scope of signification. [The reader is referred particularly to the analyses by Levi-Strauss and his disciples of various myth cycles][20].

In this conceptual merry-go-round of entities and relationships man himself is the final arbiter, the measure of all things. Thus "relationships" are not arbitrary, but are statements of conceptual and perceptual salience, and are characterized by certain selective patterns. Such patterns are pre-eminently the business of semiotics, but they have a strong bearing on the epistemology of linguistics. When a linguistic model uses relational features, it makes sense to ask what the favoured relational concepts themselves have in common.

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[20] A large body of literature exists on this topic. A starting point is Levi-Strauss himself: (1963, 1970-81, 1977).

Professional bio: Thor May has a core professional interest in cognitive linguistics, at which he has rarely succeeded in making a living. He has also, perhaps fatally in a career sense, cultivated an interest in how things work – people, brains, systems, countries, machines, whatever… In the world of daily employment he has mostly taught English as a foreign language, a stimulating activity though rarely regarded as a profession by the world at large.

Thor's eventually awarded PhD dissertation, *Language Tangle*, dealt with language teaching productivity. *Language Tangle* (2010) is aimed at professional educators and their institutional keepers, and accordingly adopts a generally more discursive style than the *Meaning of State in Grammar* analysis. Also in cyberspace (representing even more lost years!) is yet another sprawling, unfinished PhD dissertation draft in cognitive linguistics from the university of Melbourne in the early 1990s, parts of which can be seen in the Academia.edu repository as *The Generative Oscillation Model*, *Postsupposition and Pastiche Talk* and a couple of other papers.

Thor has been teaching English to non-native speakers, training teachers and lecturing linguistics, since 1976. This work has taken him to seven countries in Oceania and East Asia, mostly with tertiary students, but with a couple of detours to teach secondary students and young children. He has trained teachers in Australia, Fiji and South Korea. In an earlier life, prior to becoming a teacher, he had a decade of finding his way out of working class origins, through unskilled jobs in Australia, New Zealand and finally England (after backpacking across Asia in 1972).

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