Metaphors in Grammar

Introduction

In opposition to the traditional preoccupation of Linguistics with ‘grammar’ broadly understood here as the automatized and rule-governed combinatorics of discrete and arbitrary symbolic units, we adopt a three-level description of the syntax-semantics of natural languages, consisting of :

i. a physical-phenomenolgical level
ii. a linguistic-categorial level
iii. a metaphorical-cultural level

These levels of description and analysis have been identified on the basis of:

a. the works of René Thom and Jean Petitot on the morphogenesis of linguistic / semiotic structures; and the karaka theory of the Indian grammarians as elaborated by Bhartrhari (for level i);
b. the work of Eleanor Rosch on categorization / natural categories (for level ii);

and

c. the works of George Lakoff and Mark Johnson on conceptual metaphors (for level iii).

In general, we accept the view that has emerged in Cognitive Linguistics that the sentential semantic structures are motivated by the continuous and

dynamic form of the external, phenomenal world. The symbolic units and structures result from a process of discretization of both the expression and the content planes of language. The continuous plane of content, we believe has its source in perception, as it is through perception that the human organism establishes contact with the world. The combinatorics of the elements of the perceptually-rooted linguistic schemas produce a 'dynamic gestalt' by means of which semantic comprehension of sentences can take place (a detailed discussion appears in Manjali 1997).

We assume that at the level of the basic sentences, there exists an isomorphism between the structures of the physical- biological dynamic phenomena and the corresponding deep linguistic structures. It is this isomorphism that makes literal sentences possible, and ensures that all language is not metaphorical, contrary to the positions that Lakoff and Johnson seem to hold. In our view there is a progression from the linguistic structures constituted from the physically and biologically salient perceptual information to those that reveal wider conceptual variations. In this regard, we agree with Mac Cormac on the necessity of maintaining the distinction between the literal and the metaphorical (Mac Cormac 1985: 53-76).

In this Lecture, we go beyond the basic sentences to consider the sentences that take an auxiliary verb. We argue that verbal forms that the auxiliaries are to begin with, undergo categorial metaphorization to yield aspectual and other such grammatical meanings. From the perspective of dynamical semantics, briefly outlined here, and that of 'dynamic type hierarchy theory' of metaphor proposed by Eileen C. Way (1991), we take a closer look at the process of metaphorization that yields the specific grammatical meanings of the auxiliaries. We consider very briefly the relevance of the 'metaphorical blends' proposed by Fauconnier and Turner, in understanding auxiliary constructions. We also suggest that since 'grammar' is schematically and metaphorically structured, grammatical

differences will parallel cultural differences. And, as the metaphorical extensions are often culturally-motivated, it may be possible to map the metaphorization trajectories for different languages in relation to certain universal object / action schemas.

In sum, what we envisage is the following:

a. the basic syntactico-semantic structures are case-based; the natural interactional patterns which are perceptually processed are constituted as case schemata.

b. interactional patterns which are not radically varying with respect to a prototypical action-schema are categorized under the corresponding case structure.

c. by means of vebral metaphors, categorization of more abstract domains takes place; superordinate categories of verbs, such as temporality and deixis are more relevant here than the category of action inherent in the verb.

d. these metaphorical categorizations and the differences among them reflect the specific cultural differences that have come to be through metaphysical, scientific, or narrative traditions.

Case structures and the interactional dynamics

We have seen in Lectures 2 and 3 that the central idea of the catastrophe-theoretic semantics of Thom-Petitot and of the karaka theory of Bhartrhari is that the case-structures code and classify basic patterns of actions and

interactions perennially occurring in the natural environment, and therefore available for human perception. A finite number of these structures is capable of representing potentially infinite number of dynamical actions and events. The sentential structures are geared to capture in a gestalt-like manner the interactional dynamics coexistent with the world.

That a semantics of the sentence should capture some form of dynamics has been recognized by linguists like Luis Hjelmslev, Lucien Tesniäre, and Leonard Talmy. For Hjemslev, the category of case signified essentially a 'spatial relation between two objects'. He further defined this relation in terms of three dimensions' : Direction, Coherence and Subjectivity-Objectivity. The direction dimension — which, in fact, implied the intra-sentential semantic dynamics — refers to the movement of an object either towards (as in Accusative case) or away from (as in Ablative case) another object (Hjelmslev 1935).

In Tesniäre's 'dependency grammar', the sentence-meaning was viewed compositionally, where the subject, object, and indirect object were non-heterogeneously defined as 'actants' participating in a theatre-like act ('a little drama')(Tesniäre 1959). Contrary to the emphasis on discrete signs or symbols in Saussurian structural linguistics and Chomskyan generative grammar, Tesniäre spoke of the 'connections' that retain the continuous frame for semantic purposes. According to him, "every word, which forms part of the sentence ceases itself to be isolated as in a disctionary. Between it and its neighbours, the mind perceives connections whose ensemble forms the framework of the sentence… These connections are represented by nothing" (ibid., p. 11).

For Talmy (Lecture 5), the category of 'force dynamics' (FD) consists of exertion of force, resistance to force, overcoming of resistance, blockage, and removal of blockage, etc. Comprising a range of relations of an agonist

vs. antagonist kind, the FD category serves to explain a host of traditional categories like causativity, and those which can henceforth be seen as semantically related to it. Talmy shows that the FD schemas play the role of the source metaphor for other similar dynamics observable in the psychological, psychosocial, modal, and discourse domains. (Talmy 1988a). More generally, Talmy has argued that the grammatically- specified notions are amenable to structural schematization involving the relationship between two entities in space, time or other conceptual domains (Talmy 1988b).

Common to these approaches are the topologico-dynamic schemas identified corresponding to the action patterns. (In the karaka theory, however, the schemas are only implicit). Moreover, all except Talmy's FD schemas are directly concerned with the case category. The karaka theory, on the other hand, posits essentially different types of actions which are metaphysically construed, at least by Bhartrhari, as part of the constant unfolding of the Ultimate reality (or Brahma) as perceived from the perspective of the speaker. The karakas, or the actantial case relations originally proposed by Panini in the 5th century b.c., and followed by the long Indian grammatical tradition are the following: karta (=agent/subject), karma (object/goal of action), karana (instrument), adhikarana (the substratum of action), apadana(the source of action) and sampradana (the destination).

In the context of Thom's Catastrophe Theory (CT), the list of archetypal morphologies proposed represent a deductive system where the variations in the actantial dynamics are associated with their corresponding topological graphs. CT has essentially to do with the effect of local (quantitaive, micro-) variations on the global (qualitative, macro-) structure. It involves the topological description of the sudden, abrupt discontinuities induced by te local perturbations of a system. On the basis of the

qualitatively different configurations of discontinuities that can occur for a maximum of four control variables, Thom has identified seven ‘elementary catastrophes’, viz., fold, cusp, swallowtail, butterfly, elliptic umbilic, hyperbolic umbilic, and parabolic umbilic. These catastrophes are further shown to yield a set of 16 linguistically-relevant ‘archetypal morphologies’ or ‘semantic archetypes’ corresponding to topologically different types of verbs, with increasing actantial complexity.

esniäre’s notion of ‘valency ‘ in relation to case-structures helps us to have a clearer idea of the relationship between actantial dynamics and the case-structures.The action associated with a zero-valent verb,’rain’ pervades the perceptual frame, and linguistically manifests itself with no grammatical subject, or a dummy subject (as in English, French, etc.), or with an absolute subject as in Arabic. Uni-, bi-, and tri-valent verbs represent actions/ interactions of increasing complexity and hence yield correspondingly different case-structures, the nominative, the accusative, and the dative.

A linguistically-motivated and case-based approach to sentence-topologies may have an advantage over the Conceptual Graphs of John Sowa in that the former yields only a restricted set of structures, while the latter tend to proliferate. This latter tendency may be endemic to many approaches in Artificial Intelligence / Cognitive Science / Cognitive Linguistics which do not seriously take into account a phenomenology of perception based in biological salience, in short, of a morphogenesis of natural language.

Prototypical and peripheral instances of the case structures

Though we support the claim that the case-structures are founded upon certain basic action patterns, they do not in fact exhaust all kinds of observable actions. Rosch's prototype theory of categorization is useful in accounting for the linguistic structures pertaining to the wider range of actions. Applying Rosch's idea, we can argue that those actions which resemble a prototypical action schema associated with a case-category would be included in that category. Thus, for example, in English the Accusative case-structure can include a range of transitive actions with two actants, such as kill, kiss, hit, read, see, etc. The English sentences, John cut the newspaper and John read the newspaper appear under the Accusative case, though interactional ('force') dynamics are not the same for the two sentences. The prototypical action schema here consists of an animate subject and an object not specified for animacy.

Cultural differences can be seen to play a role in categorisation of actions in relation to the case-structures. For example, within the Indo-European linguistic 'family', we can see two different categorizations of the action of 'seeing'. While in English and French it is generally categorized under the Accusative case category, when the Object is non-pronominal, in Sanskrit and Hindi, 'seeing' is categorized under the Dative case category when the Object is Animate. Differences in grammatical typology appears to be the result of differential case-based categorizations of basic actions, and not a matter of accidental / arbitrary formal variation. Wilhelm Humboldt's 'innere sprachforme' can be better interpreted in this manner.

In a related manner, we notice that in Thom's deductive account, the morphologies for 'Capture' and 'Throw' are both derived from the 'cusp' catastrophe. Bhartrhari is more explicit on this point when he says that the Karma karaka (the Accusative case relation) subsumes 3 slightly different kinds of actions: production (nirvartya): e.g., He made jug out of mud;

modification (vikarya): He made ash from wood; and destination (prapya): He saw a tree.

We shall also note in passing that the grammatical edifice of Panini is built upon the sentence ‘Ram killed Ravana’ in the Accusative (karma) case. It is a sentence loaded metaphysically and morally. Karma, as noted by L. Renou, is the ritual act par excellence. In a comparable manner, Thom’s linguistic speculations have as the central concern, the Accusative case sentence ‘The cat eats the rat’ which is topologically associated with the ‘cusp’ catastrophe and represented by the ‘capture’ morphology :

It traces the movement in space-time of the two entities, S1 and S2 and their zone of interaction at the catastrophe point O.

Spatial Basis of Conceptual Metaphors

The evidently spatial character of the image-schemas proposed in the works of Lakoff (1987) and Johnson (1987), has led us to investigate the phenomenological basis of conceptual metaphors (see Manjali 1996). M. Merleau-Ponty’s studies on perception proceeds from an understanding of the subject-world relationship as an integrated and ‘codependent’ system governed by the orientedness of a ‘situated’ subject towards objects and events in the world. It is claimed that at the base of this relationhsip is an even more primordial relation linking the body and space. As Merleau-Ponty puts it : “Space and perception generally represent at the core of the subject, the fact of his birth, the perpetual contribution of his bodily being, a communication with the world more ancient than thought” (1962 edn.: 254). The relation between body and space is thus not to be seen as the relation

of interiority between an objective body and an objective space in which the former is located. Beneath the objective space, there is a “spatiality … which merges with the body’s being. To be a body, is to be tied to a certain world; our body is not primarily in space; it is of it.” (ibid., p. 148). Our body ‘inhabits’ space (and time) (ibid., p. 139). This primitive spatiality of the body, in the form of the ‘body image’ plays a key role in our apprehending of objects in space. “Body image is …a way of stating that my body is-in-the-world.” (ibid. p. 102, 106).

Spatiality of the body, Merleau-Ponty observes, is constituted ‘in action’, through oriented movement. Neither the subjects body nor the external objects can be seen in terms of a mere point- horizon or figure-background structure, independent of an orienting function of the bodily space. For, “as far as spatiality is concerned,… one’s body is the third term, always tacitly understood, in the figure backgorund structure, and every figure stands out against the double horizon of external and bodily space” (ibid. p. 101). The statement that a figure is apprehended against a backgorund has a meaning only in the context of a subject “placed by his body face-to-face with the world.” “When I say that the object is on the table, I always mentally put myself either in the table or in the object, and I apply to them a category which theoretically fits the relationship of my body to external objects. Stripped of this anthropological association, the word on is indistinguishable from the word under or the word beside.” (ibid. p. 101)

Thus, according Merleau-Ponty, body and space are inter- related in two important ways. Firstly a person recognizes the spatial unity of her body enactively through perception and bodily movement in space. Secondly, a person’s body is not like any other object in the world, it is instead, at the centre of the world. Space is, in fact, like an extension or organic envelope of the body, which in turn sustains the unity of the body-space system, as

the heart sustains the body. That is why the spatiality of objects is comprehended in terms of the body's spatiality.

Just as the bodily unity and the body image are understood via the body's interaction with the 'inhabited' space, the external space is understood in relation to the body. Bodily attributes and images are transposed on to space and to objects that occupy it. Thus spatial unity, and the unity of of the objects in space are constituted on the basis of the bodily unity and spatiality formed enactively in space. The unified space of the external objects acquire body-like spatial unity as well as the bodily schemas.

Another point that we may usefully note is that since our body 'inhabits' time too, temporality can be understood in terms of the bodily actions many of which have spatially extensible schemas. Kant's distinction between space as the pure intuition concerned with the 'external sense' and time as the pure intuition of 'internal sense' enable us to see the temporal dimension as 'inhabited' by the external sense of body-in-space. This is how, in our view, the image-schematic properties of body in space gets transferred on to the time dimension. And this could be the experiential source of the TIME IS SPACE metaphor.

Categorial Metaphors

Rosch had suggested that the categorization-effect can be seen not only horizontally within a category (i.e., between its central and peripheral members) as we have described above, but also vertically across categories (i.e., inter-categorially). She had identified certain Basic Level Categories (e.g., 'dog') which are perceptually more salient, more easily acquired and more extensively used in ordinary communication. In relation

to these basic level categories that capture the objects and events in the world more directly and with the least cognitive effort, there are also Superordinate (e.g., ‘animal’) and Subordinate (e.g., ‘Alsatian’) categories.

Now, within the context of ‘grammar’ verbs are basic level categories that represent commonly perceivable, basic actions. There have been studies proposing typologies of verbs. (e.g., Vendler, 1967.) These are indeed concerned with the subordinate categories: for Vendler, the class of verbs can be divided into ‘state’ vs. ‘process’, and the latter into ‘accomplishment’ vs. ‘achievement’. It appears that while a verbal typology of this kind is useful for determining the syntactic subcategorization rules, it would be even more pertinent to study the role of the superordinate categories of the Verb, and the role of their corresponding schemas in metaphorization. For instance, most of the verbs include as general semes, TIME and ACTION / EVENT. Some of the basic verbs such as GO and COME, and GIVE and TAKE consists, in addition, of the bodily and spatially salient seme of DIRECTION or DEIXIS. In our view it is these ‘supertypes’ (in the sense of Way 1991) that are at work when some of the verbal forms appear as ‘auxiliaries’ in syntactic association with the main verbs. The above-mentioned semes are exploited in the metaphorization of the auxiliary verbs to yield the appropriate grammatical meaning, e.g., perfectivity. Bernd Heine et al. (1991) have rightly suggested that the process of grammaticalization of verbs to become auxiliaries do not represent a process of ‘semantic bleaching’, ‘depletion’, or ‘desemanticization’ (as has been suggested by various authors), but instead a process of metaphorical abstraction. They view the auxiliary verbs as instances of ‘categorial metaphors’. According to the authors, the metaphorical abstractions underlying the diachronically observable grammaticalization process has the following linear chain form:

These categories are viewed as representing “domains of conceptualization…important for structuring experience. The relationship among them is metaphorical, i.e., any of them may serve to conceptualize any other category to its right” (ibid. p. 157).

Heine et al. emphasize that in verbal metaphorization, the “source concepts refer to some of the most basic human activities like do / make, take / hold, finish or say or movements like go, come, leave, arrive. Furthermore, a number of items specifying a position or state are among the most common source concepts, typically coded linguistically as be / exist, be at, sit, stand, lie (down), stay, live.” On the other hand, the authors note that “there are some verbs figuring in the basic vocabulary list …which one might consider for source concepts, but which nevertheless are not. These include eat, drink, hear, sing, hit, die, and many others” (1991: 153). Lack of adequate spatial extension or of the deictic dimension in their schemas seems to prevent them from functioning as temporal-aspectual auxiliaries.

Taking a similar metaphor view of the auxiliaries but arguing more vehemently, E. Sweetser has shown that an auxiliary-like GO- future recovers the dynamic image-schematic feature of the verb to attain the future meaning. She too claims that the grammaticalization by auxiliation involves a metaphorical process of meaning gain, rather than just a loss of meaning attributed to it in objectivist accounts.

Auxiliaries as Metaphors

Parallel to the discrete formal elements combining to yield grammatically correct sentences, the elements of the content plane combine / blend topologically to result in the semantic constitution of sentences. In the

topologico-dynamic perspective, the verbs act as the organizing centre determining the form of the case-frame / schema as well as the number and nature of the slots to be filled in. As far as the auxiliary verbs are concerned, the general tendency is that they blend with the main verbs to specify the aspectual, temporal, or modal attributes of an action represented by a main verb. Examples are the modal auxiliaries in English, the perfective 'have ' in English, the GO-futures in English and French, venir de for recent past in French, etc.

In what are known as the 'compound verbs' (CV) widely prevalent in south Asian languages, a verb that syntactically follows the main verb often expresses specific aspectual and other meanings related to the manner of accomplishment of action. Hook (1991) has noted that the CV constructions include grammatically- functioning 'full' lexical verbs which often "express a change in location or posture, or an action that entails a change" (Hook, 1991: 59, 60). The verbs identified by him are GO, GIVE, TAKE, THROW, LET GO, RISE, COME, SIT, FALL. We may add to this list the verb STAY which is used widely in these languages for the Progressive aspect. Syntactically, a CV consists of the non-finite form of a main verb followed by the finite form of one of the verbs listed above.(See Appendix for examples.)

Following Sweetser, Heine and others, Hook himself has suggested that in the CV auxiliary GO, "while the physical dimensions of going are not invoked, some topological (…) elements of the lexical meaning are preserved" (ibid., f.n. page 80).

The set of verbs that render themselves to be grammati- calized have the following properties:

a. they signify biologically salient actions;

b. they are concerned with the movement of:
i. the body as a whole from/to a point of rest, or
ii. of an object in relation to the body;

c. some of these verbs have a deictic dimension.

When these basic verbs are grammaticalized through metaphorical abstraction, indeed they lose the feature of concrete action, but retain the part that is schematic. What is lost is the concrete feature [ACTION], and what is retained are the topological features [TEMPORALITY], and most importantly, [DIRECTION] or [DEIXIS].

As per Way's analysis of metaphors, it is the common 'supertype' that underlies the two otherwise disparate items that produces metaphorical meaning. For example, in 'Nixon is a submarine of world leaders', though there is an apparent dissimilarity between the nouns 'Nixon' and 'submarine',there exists a common 'supertype' namely, 'things that behave in a secret or hidden manner', which makes the metaphor possible. The supertype is generated from our contextual knowledge of both Nixon and the submarines. In our view, in the analysis of the auxilairy metaphors the task is similarly, to identify the supertypes, or the superordinate categories which are at work to yield the specific grammatical meanings. We propose the following analyses of some of the more important 'auxiliary' metaphors:

Note:

a. When the subject goes forward/away from the rest point, it reaches objects or events in future (after).

b. Sweetser observes that “the verb GO which is used precisely to indicate motion from proximal to distal in space, is thus a perfect choice for movement away from the present in time; and since…we can’t return to the past, any distal temporal goal must be in the future” (1988: 392). Her schema for GO is as follows:

c. GO verb is also used in English to signify a movement away from a state of rest / stability / normalcy to a state of instability / abnormality, etc. E.g., go mad, go bankrupt. The equivalent of the Eng. ‘He is going mad’ in Malayalam would be something like ‘Madness is coming to him.’

7. Lexical source: TAKE (Hindi) Target grammatical meaning: Perfective when the beneficiary is the Subject.

The features are the same as in 6, except that here the beneficiary is deemed to be the grammatical Subject.

Note:
Discussing the French verb ‘avoir’ (= have), René Thom remarks that a state of instability at the connecting node of the ‘capture’ morphology (see section 3) can explain its dual value as perfective (‘J’ai parlé’) and diachronically as future (‘Je parlerai’). As he puts it, after ‘capture’, sometimes the object may remain in a metastable state, where it may be one of its possessions (=have) or as well be the object waiting to be let off by the subject (=future). Thom’s morphology for ‘avoir’ could be:

Blending approach to the Compound Verbs

Parallel to, but distinct from the feature-based 'supertype' analysis of metaphors, G. Fauconnier and M. Turner (1996) have developed their own 'mental spaces' based analysis of grammatical constructions resulting from metaphorical blending. For example, in the sentence, Gogol sneezed the napkin off the table, a non- causative verb 'sneeze' acquires the causativity feature by a metaphor-like 'blending' with another verb e.g., 'throw', which has the causativity feature. Fauconnier and Turner see here a 'conceptual blending' which is a "general cognitive process that operates over mental spaces as inputs." In blending, they explain, "the structure from two input spaces is projected to a separate space, the 'blend'. The blend inherits partial structure from the input spaces, and has emergent structure of its own." (ibid., p. 113)

How does the 'blend' work for the auxiliary verb constructions, particularly the compound verbs? At the first sight, one is tempted to assume that there are two kinds of blending at work when a compound verb WORK-GO yields the perfective meaning akin to 'have worked'. There is the syntactic 'blending' of a verb GO with another verb WORK to generate the perfective of the latter. Also, there is the metaphorical blending of GO with TEMPORALITY and DIRECTION. It is the latter sort that we were concerned with in the 'supertype' analysis suggested above.

Perhaps we may look at the problem in the following way. Once a verbal form is specified syntactico-semantically in terms of its valency and actional dynamics, it needs additional formal elements to embed it in the enunciative apsects of temporality, modality, deixis, etc. For this purpose the main verb adds on other verbs with less actional complexity (and more

salience), such as BE, HAVE GO, COME, GIVE, TAKE, STAY, etc. The meanings that the auxiliary verb abandons through analytic division, it recovers through synthetic semantic fusion. As is evident, the formal elements that appear in the division are specific and varied across languages (IS, HAVE, etc. for English; IS, HAVE, GO, COME, GIVE,TAKE, STAY, etc. for Hindi), but the enunciative functions are more or less the same. (Modality may be a test area in this regard.) The conceptual blending between the formal source lexical elements and the target grammatical meanings, may depend on the specific (cultural) embedding on the one hand of the relevant verbs and the actions they signify, and on the other hand, of the domains of the target meaning, such as temporality, (inter-) subjectivity, etc.These differences are embodied in the analysis proposed above.

Brief conclusion

Languages have as part of their lexical repertoire a variey of verbs which signify salient actions, and which have topological schemas relevant pertaining to the case structures. These schemas are also employed in categorizing less salient actions. For signifying the enunciative domains in which the verbal actions are embedded, additional verbs are engaged which signify the relevant grammatical meanings by way of metaphorical abstraction.

From a formal point of view, it is interesting to see what elements are employed by languages to signify the ‘intuitive’ or the relational part of the phenomenal world. Often words for body parts are used as prepositions for spatial represenations, which can be extended to temporal and other significations. Also, basic verbs like GO etc., can have spatial relational

functions, as has been reported in some west African languages. (see Claudi and Heine 1986). Equally interesting , as we have seen here, is the way in which these verbs are employed for signifying temporal unfolding along with indications of the directionality of action.

The different and contrary uses of the auxiliary verbs in the languages we have considered seems to correspond to different cultural-metaphorical construals of time, and perhaps of subjectivity. In Hindi and Malayalam, the GO auxiliary yields a perfective meaning. It is as if the action signified by the main verb disappears from the perceptual field of the speaker, and hence could be deemed as completed. While in English and French GO yields a future meaning. Here, it is as if the sentence-subject is moving forward along an irrecoverable temporal axis, and the subject is visualized as performing an action signified by the verb at a point of time posterior to the present point of rest. In the former, it as if the actions unfold metaphysically from an undefined time- source, reach the speaking subject and pass into oblivion. In the latter, past, present and future are ordered on a linear continuum, and the subject moves forward along the time axis; the action appears in the peceptual field at a posterior point.

Moreover, Hindi and Malayalam are relatively more action- centred. Corollarily, the action-time is mobile, and therefore is the Figure. The speaking subject is static, and is therfore the Ground. Contrarily, in English and French, the grammatical subject appears to move in a spatialized time, and hence is the Figure; time is static, and hence appears to be the Ground. Our tentative hypothesis is that this cultural orientation in the European languages characterized by the subject as the figure, and time as the ground perhaps marks the advent of modernity epitomized by the scientific and philosophical works of Newton and Descartes. Empirical studies need to be done to trace — both diachronically and typologically — the metaphorical trajectories, of languages, with body and bodily actions as

the starting point. Further work is also required on the metaphorical aspect of linguistic change.

Appendix

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