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# **How the Predicate Valence Forms the Basic Simple Sentence**

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This paper discusses the problem of the elementary simple sentence (ESS) as a minimal syntactic unit in Siberian languages. The linguistic status of ESS is provided by the **model of ESS**. This model is based on the predicate and its obligatory valences. Special attention is given to theoretical ideas on the nature of the linguistic valence.

Keywords: Siberian languages, Turkic languages, syntactic structure, elementary simple sentence, predicate, valence, actant, case.

One of the main challenges in syntax is, among others, developing the theory of the sentence as a linguistic entity. The next task is describing a complex system of sentences using this framework. The problem has only recently been recognized by linguists. Scholars started describing a sentence as a linguistic entity in the second half of the twentieth century (the end of the 70s). It was a vague picture that we had, starting this work at the Department of Siberian Languages, Institute of Economics, Russian Academy of Sciences, Siberian Branch in the beginning of the 80s. We used the evidence from the Russian language studies and our studies of the complex sentences from the Turkic languages of Southern Siberia. The patchwork of phrases revealed linguistic entities and structures. The system of complex sentences, however, is a secondary system in relation to the primary system

of simple sentences. This simple sentence had to be distinguished and described.

The sentence as the smallest unit of syntactic description was viewed from a new perspective by several research groups in the 80s. T.P. Lomtev, N.Yu. Shvedova and the *Grammar-70*, *Grammar-80* groups used the Russian language to develop the theory. Other scholars to work on the problem were V.A. Beloshapkova with her colleagues and students and several other researchers. Developing semantic groups of verbal predicates by lexicologists was another indirect contribution to the theory.

The problem of the smallest syntactic unit for the Turkic languages was first discussed by Professor N.A. Baskakov [1960], it was later developed by Professor I.X. Akhmatov and his research group in Nalchik [Akhmatov, 1983]. The studies revealed the importance of the theoretical

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approach. The smallest unit of linguistic description cannot be directly observed, but it can be modeled and formally represented. Observations and theory had to result in **the model** or abstract concept of the theoretical object. The models for the Russian language were discussed by T.P. Lomtev [1979], N.Yu. Shvedova [1970], V.A. Beloshapkova [1997]. The models for Turkic languages were developed by N.A. Baskakov [1960] and other scholars.

The Department of Siberian Languages (Institute of History, Philosophy and Philology, Russian Academy of Sciences, Siberian Branch) started working on the simple sentence after preliminary studies of the complex sentence from Altaic languages of Siberia (that is, Turkic, Mongolian and Tungus languages). Doing this research, we worked on the models of complex. two-predicate constructions. The simple sentence was considered a linguistic unit and called the basic simple sentence (BSS). The studied languages were believed to have a finite and (comparatively) small number of syntactic units – basic simple sentences. Each unit is characterized by its own meaning and expression. Our objective was to model the units using observable sentences in written and spoken language.

More than ten serious studies were carried out on the evidence of different languages. These were doctoral dissertations by S. Abdulaev «Structural-Semantic Models of Simple Sentence in Modern Uigur Language» (monograph [Abdulaev, 1992]) and I. Nevskaya «Typologies of Locative Constructions in Turkic Languages of Southern Siberia (the evidence of Shor language)» [Nevskaya, 1997], Ph.D. thesis of N. Sereedar on the main types of sentences containing nominative predicates in Tuvinian language [1995]; Ph.D. thesis of V. Telyakova «Simple Sentence in Shor Language in Comparison with Russian» [1994]; N. Sagaan's paper was on the spatial relations in Tuvinian language and their

means of expression[1998], Ph.D. thesis of N. Bayzhanova was on a powerful, minimal and polysemic model «subject + verbal predicate» based on Altai material [1999]. At the same time, N. Koshkaryova supervised several interesting diploma papers on the evidence from the Russian language. The same task was performed by the lexicological studies and doctoral dissertations of M. Chertyikova on the semantic group of speech verbs [1996] and A. Chugunekova on the verbs of motion and their syntactic models [1998]. Describing a semantic group of words, the researchers fixed the models of BSS to express the meaning of the words.

Apart from Turkic languages, some other Siberian languages were involved in the research. The Ph.D. thesis by V. Solovar [1991] was dedicated to the structural-semantic types of a simple sentence in the Hanty language. The research was mainly done on the material of Kazyim dialect.

In the course of these works it was obvious that every BSS model suggests its own set of predicates, and each predicate is related to one or several models connected to a specific meaning, which is usually hardly verbalized and invariable. The group of model propositions and situations described by the model can be both very wide and relatively narrow. From this point of view, some lexicological papers dedicated to certain semantic groups of verbs gave very interesting results. For example, a dissertation of B. Sanalova [2004] on the verbs of thinking contains some rich and representative material about the predicative capacity of verbs of thinking. N. Koshkareva with a group of students does serious and deep research in the same direction. Some of her students work on the Russian language material, deeply analyzing the «semantic range» of the models; others use the material of Tungus-Manchu, Samody and Ugric languages [Burkova 2003, Bolotina 2006,

Gerasimova 2006, Kuznetsova 2006, Sorokova 2006 and others].

In the process of such research, while they are compared and the results are discussed, there, certainly, appear a lot of questions concerning the semantics of separate models, borders between them, the problem of «a model or its variant», principles and criteria of dividing the objects, etc. Much of this is left for discussion. But if we set a target to expose and to describe the whole BSS **models system** of a certain language, there is another question, quite unnecessary at the first sight: **how many BSS can there be at all?** 

Initially, it seemed to be natural, apparent and was taken as a postulate that there can not be many BSS models. How many? An intuitive answer was: «round about a hundred, hardly more than a hundred...». Now, after working for 20 years with the factual material of several languages of different systems, we still do not have any clear answer to the question. However, regarding verbal models in Turkic languages of Siberia, we can already give an answer with the help of quite simple approximate calculations. In particular, the calculated number of «canonical» verbal two-part models is 57; it includes spatial models and also takes into account 8 «variable» actant cases. The number is based on the following calculations:

1. BSS is a central language unit. Every unit of this range expresses a cognitive structure of a certain type, and it forms the BSS plane of content on the level of language, «the instrument of thought». Speech gives some forms to this meaning which is used to embrace common discourse. Organized in a certain way, these symbolic structures are correlated with situations appearing in life and in the sphere of thoughts. There is only «the thought anticipation», before it is formed by word forms. «Images» become thoughts, getting their «verbal clothing».

2. In inner, **unconscious** memory of a common man there is a whole set of learnt BSS models prepared for use. It means that, the set must be **very limited** both quantitatively and qualitatively.

Proceeding from the formula  $\langle 7\pm 2\rangle$ , which represents a reserve of the fast-acting (actual) memory of a man, I suppose that we must start from the minimal number: 7-2=5 (theoretically we also admit the maximum: 7+2=9). In other words, an actively functioning formula of BSS cannot contain more than five components or positions. **BSS models** consist only of a predicate and of its actants. In verbal **BSS** the predicates are verbs, simple or complex. It means that, the verbal sentence, **as a language unit, can** consist of a predicate and four actants.

Actants are represented by two types. The first one is proper actants that is nouns in the form of eight conditional proper-actant cases (their list is given below). The second one is actants-localizators. They can be represented by nouns in the form of spatial cases. In Turkic languages this function is fulfilled by the local case (where?) and spatial variants of ablative and dative cases. In Khakas and Altai languages, this set is enlarged by a new, developing directing case (where to?). Ablative case is used in its spatial meaning (where from?).

Apart from these basic forms in Turkic languages, spatial relations are expressed with a rich system of postpositions correlated with spatial cases, and by the whole system of so-called «functional nouns» specifying the spatial relations typology, which is predetermined by the case system. Local relations are presented by an incomplete declension paradigm, its centre consists of already mentioned three types of case forms (where – where to – where from), besides, there are some other cases and postpositions with the spatial meaning. Lexical meanings of declinable functional nouns reflect a thoroughly

developed system of spatial relations; for example, the relation «where to» is rendered in detail as upwards, to the upper part of something, downwards, sideward, under something (to hang, to nail), above something, before something, behind something, etc. The set of these forms makes up a special paradigm, and there is its own one in every language.

Here, we present a list of actant functions and their corresponding forms (the functions are given in Latin terms; the forms are presented by their Russiantranslations):

### Actant functions:

- 1. **Nominative**. <u>Imenitedniy</u> the subject case.
- 2. **Accusative**. <u>Vinitelniy</u> the direct object case (the object of direct action).
- 3. **Dative**. <u>Datelniy case</u> is bifunctional, it is included in both the first and the second (spatial) sub-systems, but its functions are not heterogeneous:
  - 1) The case of the receiver, whom the object and the information being given to;
  - 2) The case of the object, the subject's emotion being directed to;
- 4. **Ablative**. <u>Iskhodniy</u> case is bifunctional, the same as dative:
  - 1) The source case of the object and the information being received from (from whom?);
  - 2) The object case of «emotional repulsion» (*fear*, *disgust* and etc.).
- 5. **Instrumentalis** (<u>tvoritelniy</u>) is the case of the action instrument and means (expendable and non-expendable).
- (6. **Comitative** (co-operative or, to be more exact, «mutual») is the case of a partner or a counteragent in the situation of interaction (to struggle, to fight, to be at war, to compete, to be friends and so on). In the researched languages it originates from the postposition  $bile \rightarrow le$ , coinciding with the form of **Instrumentalis**

(tvoritelniy); in Russian this meaning is rendered by a form with the prepositions of compatibility *s*, *so* (with, together). As a case-form, this form is still developing, and it should be additionally checked to become a separate case.)

- 7. **Deliberative** is the case of a message theme, what is spoken about, written about, learnt about. This case-form (<u>izyasnitelniy</u>?) is used only in Khakas language, in others only function words, i.e. postpositions are used (as it is in Russian: preposition *o* (chyom? *about* what?) is used).
- (8. **Sanction** a motive, a reason of an emotional, moral or force impact «what for?» (to premiate, to arrest, to abuse, to praise, to award, to fine, to punish and etc.). There has been fixed a synthetic case-form in none of the researched languages, but there is a good method of analytical expression of the component.)

### Spatial cases (localizators):

- 9. **Locative** a place, where somebody or something is situated at (the function is expressed by the form of <u>mestniy</u> case).
- 10. **Delocative** the place, where somebody or something is going from (<u>iskhodniy case + postposition</u>).
- 11. **Adlocative** the place, where somebody or something has come to (<u>datelniy case + postposition</u>).

The form of **Genitive** (<u>Roditelniy</u>) case is not used in verbal models.

Proceeding from the formula, given earlier,  $7 \pm 2$ , the limit number of actants in the verbal sentence (as a **language** unit) must be four. But 4 is the upper **limit**, such forms are peripheral, the same as Zero-actant forms, i.e. impersonal. The main amount of sentences as **language units** must contain one, two or three actants, and one of them is the subject in the given basic part of the system. Thus, there is one **variable form** in two-actant models, and two forms in three-actant models. The range of their grammar variability is 11 «cases»,

two of them – deliberative cases and sanctions are in some ambiguous. Two latest – «locative cases» are relative, as it has been shown earlier.

Let's consider the system of verbal BSS models in detail.

- 1) Zero-actant model is presented by **one impersonal predicate,** and it is naturally **single: Vf 3pers. sing.** In Russian, it is presented by such sentences as: *Svetaet, Cmerkaetsya, Stemnelo, Dozhdit,* and some others of this sort. In the Hanty language, V. Solovar discovered four such sentences. In Turkic languages, there are more of them, but they are also rare.
- 2) The models, consisting of two components - the predicate and the actant-subject (oneactant models - N<sub>1</sub> Vf <sup>1</sup>). There are a lot of phrases built up according to this scheme. But there are only three models in Turkic languages and two of them must be specially studied taking into consideration the voice forms of the verbal predicate: the active voice (the main volume) opposes passive and reflexive, their relations (the significance of their opposition) ref. to works [Bayzhanova 1999; 2004]. In the Russian language, these constructions have been analyzed in the doctoral dissertation by T. Kulyatina [2006]. Thus, one-actant model is also single, though it is presented by a multitude, to be exact, by a complex system of functional variants.
- 3) The models of three components the predicate and two actants, one of them is the subject, the other is the object or actant-localizator (two-actant models). There can be 7 + 3 = 10 models of the class.
- 4) The models of **four components the predicate and three actants**, two of them are variable (three-actant models). The number of such models theoretically corresponds to the combination  $C_2^{10}$ , i.e. 45 models.

In total, there are 57 verbal models (mononuclear models with different «specifying» proper spatial postpositions (meaning 'along, 'across', 'by' and so on) are not taken into consideration here).

Nominal sentences differ significantly from verbal ones, because in nominal BSS, lexical semantics of both the predicate and the subordinate nouns has a greater influence on the whole semantics than the structural scheme. That is why the question of **variants** differentiation within the models and the question of different **models** with equal structural schemes need special attention. We think that two-component nominal predicate is still, to some extent, «a thing in itself », and «intimate relations» between the predicative noun and the link demand attention and deep thinking.

The problems connected with BSS, the main emic matter of syntax, are important and theoretically significant even now. The Department of Siberian Languages, Institute of Philology, Russian Academy of Sciences, Siberian Branch, advanced the problem farther, and, may be, deeper than other research groups. This work should be continued, it is necessary and important. The department members give lectures at the Faculty of the Humanities of the Novosibirsk State University where all the revealed BSS models are shortly considered. But there are some questions left, which have not yet been considered. There are only few articles dedicated to the central models of action. There is no special work on the models with accusative and dative cases; much is still waiting for analysis and description.

However, the main question of the BSS models, which forms our world view, is the problem of **predicate valence**.

Basic simple sentences are built on the basis of **strong valences of predicates**, and that is,

Impersonal sentences with indirect actant forms must be analyzed separately. They are seldom met. Only two verbal models can be considered to be regular in Turkic languages.

first of all, of course, verbs with their systems of strong valences. Some verbs (they are mainly voice derivatives) can govern simultaneously even four actants. But, in every language, there are also non-verbal predicates, which also possess actant valences — non-finite verbal forms (participle, infinitives, adverbial participle), adjective forms — short-form and full-form adjectives in the Russian language (*smeshno, smeshnoj, =oe, =aja, tjazhelo, veselo*) and comparative degrees (*legche, trudnee, pechal'nee*) and substantival predicates, where predicates are mainly «relation names» (for example, *brat, drug, zamestitel', direktor, rukovoditel'*).

The notion of valence itself seems to be simple: verbs govern nouns, «requiring» from them a certain «turn» – case. In particular collocations, the verb with valences A, B and C, governs three nouns requiring from each of them a certain case or conditional casal, pre-postposition form – such form, which expresses the **given** relations between the participants of the proposition and the action.

What kind of mechanism do we call a valence? The phrase is simple by its meaning: the verbs govern the nouns requiring from them (from us!) the noun positioning in certain grammar forms. Different verbs have different requirements. Some predicates only need one substantive form to describe the situation – *Rebenok zasnul;* others need two or three different forms. But how can the predicate require anything, how can it «govern the actant»?

The term «valence» was borrowed from chemistry and it is still young. There was no such a term in the Thesaurus of S. Ozhegov (1987). It appeared in the Linguistic Encyclopedia Dictionary where V. Gak [1990] described it as «a word capability to syntactically combine with other elements». He underlined that the term tracing back to Lat. *valentia* 'force' was coined by S. Katsnelson in 1948 to describe the compatibility of verbs and other predicates with

subordinate words [Katsnelson, 1948; ref. also Katsnelson, 1987]. Later, Lucien Tesniere [1976] limited the term by the compatibility of verbs with nouns and interpreted the valence as a quantity (number) of actants, which the verb can unite. Now, in linguistics, the valence is comprehended not only as a number of actants, but their «quality» is also taken into consideration. The predicate requirements are met by a certain set of actants positions and grammar forms.

The borrowing of the chemical term into linguistics suggests that its authors felt a sort of analogy of the relations at the atom-molecule level and in the system of «language». Linguists felt a strong similarity between the speechthinking processes and the processes of molecular structures in the material world and, that is why, in order to designate the «force», included in the predicate, that very chemical term was chosen and it became naturalized.

In physical, material world, an atom of one sort of material pulls on to itself a certain number of «foreign» electrons, which the partner possesses in excess, and thus, a new combination (substance) is formed. Linguistic structures are ideal. But the notion of «electron», as of a minimal material unit, is close to the notion of seme, the minimal unit and the sense «component».

The language valence is a sort of an «inborn» feature of the predicate, and, first of all, of the verb, which realizes its meaning (assignment), subordinating a certain number of actants; they «turn» according to its requirements, and adopt the necessary casal form, expressing their relations towards the predicate.

Each predicate, first of all, the verb (and the verb valence), includes a program defining both the **number** of actants – from zero up to three (the possibility of the forth demands a special discussion), and their **«quality»**, i.e. a casal form (sometimes, it turns out to be analytical in both languages, Russian and Turkic). The valence

realizes itself as a verb capability to outline a precise situation contour (proposition type), surrounding itself by a certain number of actants in the given grammar forms. The predicate does not demand from the actants any definite strong and concrete semantic requirements, lexical meanings, - except grammar ones, being directly connected to a definite casal form. If all the valences of the predicate are fulfilled in the right way, the sentence construction will be grammatically well-formed with any lexical filling. But, grammar correctness guarantees neither soundness of phrases, nor their correspondence to the reality. Soundness of phrases is defined by phrases «outer» relations, by their «possibility to be imposed» on a typical or some concrete situation.

Words are able «to be spread semantically ad infinitum», and if it is needed by the circumstances – we shall remind of the experiment with a phrase about «wildly sleeping pale green ideas». But, it is always expected that every predicate valence corresponds to nouns in proper forms and with a definite semantic type. Thus, the Russian verb *postelit* assumes a subject – a man and an object – a bed, a table-cloth, a carpet, a newspaper and so on. But the possibility of figurative usage makes the compatibility of concrete lexemes unpredictable. (Compare: poetic *Postelite mne nebo* 'Make me my bed of the sky').

The valence is not a morphologic category, but a semantic and syntactic one; initially, it is **not** connected with **a word** as a unit of lexis and morphology, **but with a predicate** as «**a demiurge**» **of the sentence**». In modern Russian linguistics there are different interpretations of the valence notion as of a predicate compatibility with subordinate nouns. It is being developed in different directions. The valences are also registered by the deverbative nouns (as «a verbal inheritance»), and by some types of adjectives (*znakom(yj) s kem, pohozh(ij) na kogo, predannyj komu* and so on), by the words of «the category

of state»: strashno, bol'no – komu and etc.), by nouns – names of relations (doverie k chemu, reshenie chego, obuchenie kogo – chemu, znakomstvo, druzhba ch'ja s kem, trudoemkost' chego), and by other words, which are difficult to be determined as parts of speech, but their semantics «relativity» is obvious (for example, the comparative predicates: podobno chemu, vrode chego, po sravneniju s chem and etc., Altai: oshkosh, Tuv.: yshkash and etc).

There is also such a notion as «reverse valence», when the word is «ready» to subordinate to a stronger one (in particular, the adjective subordinates to the noun); there are obligatory and optional valences. But it is clear, that the essence of the linguistic valence notion is strongly connected to **the predicates** in a wide understanding of the term.

The main valence carrier, of course, is the finite verb. That is why both S. Katsnelson and L. Tesniere made their choice for the word valetntia - «force», it indicates the force, coming from «the principal of the sentence», the predicate, and directs it to another, to a noun word, subordinating it and turning it by the necessary side (case). The noun subordinating to the predicate is expressed in both Indo-European and Altai languages, first of all, by the acceptance of a certain dependent form, within which the actant subordinates to the predicate. But the construction  $V \rightarrow N_i$  expresses by its content a definite attitude of the subjective participant of the action (process) towards the action, called the verb, i.e. that very role, which is programmed in the predicate-verb semantics according to the «subject» function in the given action. As a predicate of different models, the polysemous verb carries in itself different programs, different requirements towards the quality and quantity of the actants.

The verb is the most typical «valence carrier»; its initial syntactical function is the morphologized **predicate**. The verb simply does

not exist «without valences». «Impersonal verbs», – *skvozit, smerkaetsja, rassvetaet*, – are already not verbs in their essence, they are deprived of personal paradigm and change only in tense.

On the other hand, non-verbal predicates yield to the verb in valence «force». The main valence of the adjective, for example, is aimed to the specifying attributive and, that is why, is weak: V nashem klasse est' (ochen') umnaja devochka. The subject valence of the noun predicates is also weakened. Other actant valences of the noun predicates are lexically and syntactically conditioned. Thus, for example, all the qualitative adjectives require ablative case from the benchmark of comparison in the constructions of the feature force comparing): Compare: Altynaj sanaalu kys. - Altyinay is a clever girl. And: Altynaj syjny=naN sanaalu. – Altyinay is **cleverer** than her younger *sister*. (*syjny=naN* ablative case, - 'from sister cleverer', in Russian - genitive case is used).

It means that, the valence as a feature of the predicate is characterized to the utmost by the verb and it defines the central position of verbal BSS in syntax of the simple sentence.

Thus, the valence is an «inborn», inner feature of the predicate, which forms the thought, and this feature makes it flexible, potentially ready for its externalization in the sentence of different types and different kinds of thoughts. Each verb potentially includes in itself a certain number of valences. But each time, being used in speech, it realizes only one of the possibilities, governing a certain part of its potential actants. Sentence, as a carrier of the certain meaning, is formed in the process of reciprocal influence of governed actant forms over each other and their interaction with the dominating verb (the predicate). In this process the valence represents a border and, at the same time, a directing force in the searching process of the phrase completion. It allows calculating BSS proceeding from the predicate valence system.

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