

Verb Categorization and the Format of a Lexicographic Definition (Semantic Types of Causative Relations)

1 Introduction

The verb CAUSE, which has no direct equivalent in Russian, is frequently used in lexicographic definitions formulated according to the principles of the *Meaning-Text Model* (MTM) (Mel'cuk, 1974; Apresjan, 1974; Mel'cuk & Žolkovskij, 1984) in terms of the artificial *kauzirovat'* 'to cause'. For instance, *raširit' X* 'to make X broader' is defined as 'to cause X to become broader', *soobščit' Y-u, čto X* 'to tell Y that X' as 'to cause Y to know about X'. In this paper, we show that there is a need for a more detailed and differentiated representation of causative relations in lexicographic definitions.

Causative relations became an object of a special analysis in (Wierzbicka, 1980), where it is shown that not only verbs like *nakormit'* 'to feed' or *ubit'* 'to kill' (secondary transitives according to J. Lyons), but also *myt'* 'to wash' or *kopat'* 'dig' (primary transitives) and even non-transitive verbs like *vstat'* 'to stand up' and *sest'* 'to sit down' – are, in their deep structure, causative. The difference between 'to feed' and 'to stand up' disappears if one takes into consideration the fact that 'to stand up' has an Inner Object: *vstat'* = 'to cause one's own body to be in a certain position'. In a negative way, a causative relation is accounted for in lexicographic definitions of verbs that are not transitive altogether, e.g., of verbs denoting non-agentive processes. A process is something that happens without an internal causer, as if by itself (Gavrilova, 1990). For instance, *Dom razrušilsja* 'The house collapsed' = 'the house reached the state of collapse as if by itself' (the formula 'as if' is meant here to reflect the fact that it is not the real situation we speak about, but the way it is modeled in language). Indeed, we know that in the

real world, the deterioration of a house is effected by the influence of "natural forces", e.g., wind or water.

A. Wierzbicka establishes a relationship between causation and the basic taxonomic categories of verbs. She relates causation to such notions as action, process, event, happening, state, and other aspectual classes of Vendler (1967). In this paper, we attempt at a more detailed analysis of this relationship. We propose that verbs belonging to different taxonomic categories differ by the *format* (or *scheme*) of their lexicographic definition, whereas for verbs belonging to the same taxonomic category the format of the lexicographic definition is the same. We shall demonstrate that the difference between formats is determined first of all by the place occupied in a definition by the causative connector (and, of course, by the types of arguments of the causative relation).

We assume that arguments of a causative relation can only be situations (events, states of affairs) or facts: a person cannot be a Causer. Thus, if in the surface structure of a sentence the syntactic Subject of a causative verb of action is the name of a person, then "in the deep structure" the Causer will be this person's activity; e.g., according to Wierzbicka (1980):

- (1) John killed a fly —
'John's activity resulted in that the fly ceased to be alive'.

This definition may be reformulated as follows:

- (1') 'John acted with a certain purpose' and 'John's activity resulted in that the fly ceased to be alive' and 'this result coincides with John's purpose' (i.e., 'by this activity John achieved his purpose'.)

In our model, each semantic component of a lexicographic definition must have some heading: the component is one of the values of the parameter named by the heading; thus, (1') =

- I. Causer: John acted with a certain Purpose.
- II. Causation (controlled): (I) resulted in (III).
- III. Result coinciding with Purpose: the fly ceased to be alive.

Here (I) is the *categorial* component: it reveals the fact that the verb *to kill* belongs to the taxonomic category of actions. If the surface Subject of a causative verb is inanimate, i.e., if it denotes a physical object, then in the deep-structure of the sentence the Causer is some event, state or characteristics of that object—'something sayable about X' (the formula is from Wierzbicka, 1980), and such a verb does not denote any action, compare:

- (2) Bant ukrasil plat'e
 'The bow decorated the dress' =
 'the bow made the contact with the dress <event> and
 because of that the dress began to look better'.

If so, then the difference between (3) and (4)

- (3) *Ivan napomnil mne, čto pora uxodit'*
 'Ivan reminded me that it was time to go'
 (4) *Boj časov napomnil mne, čto pora uxodit'*
 'The chime of the clock reminded me that it was time to go'

is not that in (4) the Causer is an event whereas in (3) the Causer is a person: in (3) the Causer is the person's action, i.e., also an event. What really matters is that in (3) the consequence is the EXPECTED RESULT of the activity Causer: the result desired by the Subject; whereas in (4) there is no potential Subject of volition. Hence, the scheme of definition for *napomnil!* 'to remind' in (3) is:

- I. Causer: The Subject acted with a certain Purpose.
- II. Causation (controlled): (I) lead to (III).
- III. Result coinciding with Purpose: in the active part of my consciousness an idea appeared: 'It's time for me to go'.

The scheme of definition for the verb *napomnit'* in (4), where it denotes non-controlled causation, is as follows:

- I. Causer: event X took place.
- II. Causation (non-controlled): (I) evoked (III).
- III. Consequence: event Y took place: in the active part of my consciousness an idea appeared: 'It is time for me to go'.

Thus, the first semantic distinction in the class of causative relations is the opposition of *non-intentional* (non-controlled) causation, see Section 2, and *intentional* (controlled) causation, see Section 3. All oppositions discussed below are relevant only for intentional causation.

The opposition of *direct causation* (as in the definition of *to kill* we quoted) and *indirect causation* (unambiguously expressed in English by an analytical construction with the verb *to cause*) was analyzed in detail in (Wierzbicka, 1988) and will not be touched upon here. Note that in Russian, unlike in English, the difference between direct and indirect causation is not very well marked: the Russian sentence (5)

(5) Ja sšila sebe jubku

may be interpreted as expressing a direct as well as an indirect causation:

- (5) a. 'I have sewn the skirt by myself.
- b. 'I have got a skirt sewn for myself by somebody'.

Another notion to be introduced in connection with causation is 'non-complete control of the Subject over the situation'. Compare verbs like *zakryt'* 'to cover', *postroit'* 'to build', which denote actions with common controlled causation, and verbs like *resit'* <*zadaču*> 'to solve <a mathematical problem>', *ugovorit'* 'to talk somebody into doing something', 'to convince', *pojmat'* 'to catch', whose meaning implies the idea of a good luck and, therefore, of non-complete control. The opposition of complete and non-complete control is discussed in Section 4. On the other hand, common controlled causation contrasts with guaranteed causation (presupposing the impossibility of an unsuccessful attempt), which is exemplified by such verbs as *govorit'* 'to say' and *obescat'* 'to promise'; see Section 5.

2 Non-intentional (Non-controlled) Causation

The distinction between controlled and non-controlled causation is determined, in the first place, by the nature of the first argument (Causer) of a causal relation: in the case of verbs of non-controlled causation, the Causer is an event or a state. For verbs of controlled causation, the first argument is the activity of the Subject. The second argument of the non-controlled causation is called "Consequence" (and not "Result coinciding with the Subject's Purpose", as with controlled causation). The following classes of verbs are to be distinguished:

(i) Verbs whose first argument denotes a situation, such as *udivit'* 'to surprise', *ispugait'* 'to frighten', *ogorčit'* 'to upset', *napolnit'* 'to fill', and *razbudit'* 'to awake' (in one of its meanings):

(6) *Ego pojavlenie menja udivilo* 'His arrival surprised me'.

(7) *Menja razbudil zvonok v river'*
'The bell (= the ringing of the bell) at the door woke me up'.

Verbs in examples (6) and (7) belong to the taxonomic category 'happening'; see (Wierzbicka, 1980:177). The meaning of verbs of non-controlled causation may be represented with the help of the verb *vyzvat'* 'to evoke', whose arguments are events; compare the definition of *napomnit'* in sentence (4), Section 1.

(ii) Verbs with the first argument denoting a factor (force):

(8) *Veter zasypal moj stol lepestkami ciresni*
'The wind covered my desk with petals of a cherry-tree'.

(9) *Tvoja tabletka menja uspokoila*
'Your pill quieted me down'.

Verbs in (8) and (9) have Imperfective counterparts, so we must provide with definitions not only (8) and (9), but also (8') and (9'):

- (8') Veter zasypaet moj stol lepestkami ciresni
'The wind is covering my desk with petals of a cherry-tree'.
 (9') Tvoja tabletka menja uspoikaivaet
'Your pill is quieting me down'.

Consider the semantic definition for (9'):

Exposition. Subject of the state is in a psychic state; State is not normal.

- I. Causer: The event took place; the factor is applied.
- II. Causation: The factor caused and maintained the process in the Object; process has an inherent limit.
- III. Limit of the process: Subject of the state is a psychic state: the state is normal.

(iii) Verbs with an animate Subject, which fall into three groups. Group 1 includes verbs of non-controlled causation such as *skončalt'sja* 'to die', *lišit'sja* 'to lose', *pogibnut'* 'to perish', *vspomnit'* 'to recall <by chance>', and *najti* 'to find <by chance>'. These verbs denote happenings: their Subject does not produce any action, being a passive participant of an event (a Patient of something that happens to him).

Group 2 contains verbs which imply some action or activity on the part of the Subject causing a consequence that was not intended by the Subject. As a rule, this consequence includes some non-intentional damage to the Subject or to somebody else.

Examples:

upast' 'to fall', *ošibit'sja* 'to make a mistake', *spotknut'sja* 'to stumble', *uronit'* 'to drop', *poskol'znut'sja* 'to slip', *tolknut'* 'to push', *promaxnut'sja* 'to miss <a target>', *udarit'sja* 'to strike against sth', *opozdat'* 'to be late for', *poterjat'* 'to lose', *svalit'sja* 'to fall', *ušibit'sja* 'to hurt oneself', *zadet'* 'to touch <by chance>', *upustit'* 'to lose/drop', *slomat'* 'to break', *otdaviti' nogu* 'to tread on smb's foot', *nastupit' na nogu* 'to step on smb's foot'.

The taxonomic category to which the verbs of this group belong is a happening with an acting Subject. The format of definition of these verbs also includes non-controlled causation, but it contains one additional component as compared with the format of definition of simple happenings: the component 'Subject acted with a certain purpose', which, as with actions, is not a Causer but occupies a separate zone of the format of definition called *Exposition*. The real Causer is not the Subject, but something that happened to the Subject. It is this anonymous Causer that brought about the consequence not coinciding with the purpose of the Subject's activity. Consider the definition of the verb *uront'* 'to drop':

First exposition: The Object had a support connected with the Subject.

Second exposition: The Subject was acting with a certain Purpose

- I. Causer: Something happened to the Subject.
- II. Causation (non-controlled): (I) caused (III).
- III. Consequence: The Object lost its support and moved down.
- III'. Subject is responsible for the damage caused.

The presence of the component 'damage' in definitions of verbs belonging to Group 2 is justified by the fact that two antonymous verbs, one of them signifying a non-intentional damage and the other a success, belong to different taxonomic categories: the former belongs to the category of happenings with an acting Subject, while the latter belongs to the category of result-oriented actions (Vendler's achievements); cf. pairs: *proigrat'* 'to loose <a game>' [happening] – *vyigrat'* 'to win <a game>' [achievement]; *promaxnut'sja* 'to miss <a goal>' [happening] – *popast'* 'to hit <a goal>' [achievement].

Group 3 contains verbs with an ambiguous meaning: they may denote, depending on the context, both actions and happenings. Here belong:

- verbs of destruction; e.g., *sloamat'* 'to break';

- verbs of deformation; e.g., *razbit'* 'to shatter', *porvat'* 'to tear', ; *porezat'* (*palec*) 'to cut <a finger>', *razrezat'* 'to cut <into pieces>', *razodrat'* 'to tear', *raskolot'* 'to crack', *razrubit'* 'to chop <into pieces>', *otbit'* 'to chop off', *otkolot'* 'to chop off', *otorvat'* 'to tear off', *probit'* 'to break through', *prokolot'* 'to pierce', *pognut'* 'to bend', *sognut'* 'to bend' (but not *razognut'* 'to bend out'), *vyprjamat'* 'to straighten';
- transitive verbs of movement; e.g., *prolit'* 'to spill', *rassypat'* 'to scatter', *vyilit'* 'to pour out', *vysypat'* 'to scatter out';
- verbs denoting change of position; e.g., *oprokinut'* 'to overturn', *perevernut'* 'to upset', etc.

Compare controlled (10b) and non-controlled (10a) meanings of the verb *usypat'* 'to scatter with sth' = 'to spread components of the object on the surface covering all the surface by dropping or scattering':

- (10) a. *Ty usypal ves' pol kroškami*
lit. 'You have scattered all the floor with crumbs',
b. *Ona usypala mogilu cvetami*
lit. 'She scattered the grave with flowers'.

In sentence (10c), it is not clear whether the action was intentional or what happened is an undesired or at least unneeded consequence of the Subject's activity; thus, it appears ambiguous or even strange:

- (10) c. *Ya usypal pol v podvale opilkami*
lit. 'I scattered the floor in the basement with sundust'.

We interpret verbs in Group 3 as a case of regular ambiguity (in the sense of Apresjan, 1974). Meanwhile verbs of Group 2 have only one (non-controlled) meaning. Indeed, verbs of Group 2, such as *uronit'* 'to drop', *slomat'* 'to break', and *isportit'* 'to damage' are used as verbs of action only on the condition of a categorial shift. Thus, in examples

- (11) *Ty lomaješ' stul*
'You are breaking the chair' (from Apresjan, 1988)

and

(12) Ty portiš' mebel' 'You are damaging the furniture', with the verb in the Imperfective, the Speaker interprets the activity of the Subject as having a purpose which the Subject did not have in mind. Note that 'to cause' is used below in the meaning *vyzvat'* 'to evoke', which is a momentary verb, and in the Imperfective it cannot have the meaning of the Progressive. The idea of "unfolding non-controlled causation" may be rendered by the verb *vozdejsťvovat'* = 'cause and maintain a process in the Object'; it is employed in the definition of the verb *uspokaivat'* 'to quiet down' in example (9'), Section 2.

3 Intentional (Controlled) Causation

Controlled causation takes part in the lexicographic definition of a verb that denotes an (intentional) action of a Subject capable of having a purpose (it must be a person or, sometimes, an animal); cf. *otkryt' okno* 'to open a window' and *svit' gnezdo* 'to make a nest'. Consider the lexicographic definition of *to kill* in Section 1. Lexicographic definitions in MTM do not make any distinction between controlled and non-controlled causation. For example, in (Apresjan, 1974:176-177), it is pointed out that controlled and non-controlled meanings of *porvat'* 'to tear' exemplify speech ambiguity and are not lexicographically relevant. Indeed, distinctions like this one induce many inconveniences to a lexicographer, for regular ambiguity must be acknowledged for a large number of verbs (e.g., for all verbs of the Group 3 above). However, large scale regular ambiguity, if adequately represented, should not be an embarrassment for a lexicographer. On the other hand, if the distinction between actions and happenings is acknowledged we can make a number of useful generalizations concerning the combinability of lexemes and their surface behavior. Some examples:

1. As a rule, an action verb in the Perfective Aspect (Pfv) has a corresponding Imperfective (Ipfv) with the meaning of the Progressive (Progr); compare *zakryt'* 'to shut-*zakryvat'* 'to be shutting'. On the other hand, for verbs denoting happenings, such as *zametit'* 'to notice', corresponding Ipfvs with the meaning of the Progressive are excluded.

2. The acceptability of the so-called resultative interpretation of an Imperfective verb depends on whether it can denote an intentional action; see (Paducheva, 1991). Thus, (13a) is acceptable in contrast to the anomalous (13b) where the context makes one interpret the verb as denoting a happening and not an intentional action:

- (13) a. *Ja ostavljal čemodan v garderobe <poka my xodili v muzej >*
lit. 'I was leaving the suitcase in the cloak-room <while we went to the museum>'.
b. *Ja ostavljal čemodan v električke*
lit. 'I was leaving the suitcase in the train'.

3. As is known from Fillmore (1968), the argument Instrument is only possible for verbs denoting intentional <physical> actions. Thus, the notion of action is also relevant to complementation. Consider an example (after Bulygina, 1980):

- (14) a. *Karenin zagorodil soboj Annu* 'Karenin hid Anna with his body'
(lit. 'Karenin blocked the access to Anna with himself')
b. ***Kamen' zagorodil soboj vxod*
lit. 'A (big) stone blocked the entrance with itself,

rather:

Kamen' zagorodil vxod
'A (big) stone blocked the entrance'.

In fact, if the situation denoted by the verb presupposes an Agent then the possessive pronoun in the Instrumental case is at place; if there is no Agent then there is no place for an Instrument.

These facts, as well as many others, demonstrate that a semantic dictionary should draw a distinction between actions and happenings, i.e., between controlled and non-controlled causation.

4 Partial Control

Let us now consider some semantic classes of verbs of action (i.e., of verbs with controlled causation). Actions may be classified on the basis of the opposition of *usual* vs. *non-complete* (= partial) control of the Subject over the situation. The lexical meaning of a verb may explicitly express the idea of non-complete control only: complete control of the Subject over the action is impossible—any action, e.g., the opening of a window, may result in failure; see (Zaliznjak, 1991). Momentary actions with guaranteed causation are an exception; see Section 5. The essence of non-complete control of the Subject over a situation consists of the idea that if the Subject has achieved the goal this means that he or she has been making attempts to achieve it and has, at last, succeeded. Thus the lexical definition for verbs denoting non-complete control should contain the element 'good luck'. Non-complete control is characteristic, for instance, of the group of verbs mentioned in (Apresjan, 1980:64), such as *rešit* 'to solve', *dobit'sja* 'to get', *doždat'sja* 'to wait until the happy end', *dokazat* 'to prove', *pojmat* 'to catch', and the like. A peculiar feature of behaviour of these verbs is that the component 'the Subject was acting with a certain purpose' constitutes the presupposition in the meaning of a verb in the Pfv; e.g., *ne rešil* 'did not solve'-*rešal* 'had been solving, trying to solve'; *ne dobilsja* 'did not get' – *dobivalsja* 'had been trying to get'; *ne doždalsja* 'did not wait until' – *dožidalsja* 'had been waiting'; *ne pojmal* 'did not catch' – *lovil* 'had been catching, trying to catch'. This peculiarity of behaviour may be explained on semantic grounds if one acknowledges the semantic component 'X succeeded in P' as taking part in the lexical decomposition of these verbs. Indeed, *X succeeded in P' implies:

- (i) P is difficult to achieve;
- (ii) X has been making attempts to achieve P (i.e., X has been acting).

Verbs of action that contain the semantic component 'attempt' are called *conatives*; see, e.g., (Tommola, 1986). The component 'success' opposes conatives to verbs denoting gradual accumulation of a property that are characterized by a component 'a certain process takes place in the object'. For a discussion of these two groups of verbs see (Maslov, 1948).

5 Guaranteed Causation

There exists a class of verbs in which the causative relation between the activity and its result is almost reduced to the identity of the action and its consequence. In such cases, we speak of *guaranteed causation*. We come across this type of causative connection, for instance, in verbs denoting speech acts. There are severe restrictions as to what can be caused by a speech act. The Speaker can:

- (i) cause the Addressee to know the epistemic or volitive state (of the Speaker); for example, in stating something (cf. verb *utverždat'* 'to state'), the Speaker causes the Addressee to know the epistemic state of the Speaker (and, perhaps, is trying to change the epistemic state of the Addressee—to make him believe the Speaker's statement);
- (ii) change the epistemic state of the Addressee; thus, *soobščit'* 'to inform' = 'to cause to know' contains the component 'guaranteed causation'; hence the unacceptability of **soobščal, no ne soobščil* meaning 'informed but did not inform';
- (iii) change the deontic state of the Addressee; thus, *razrešit' / zapretit'* 'to allow/to forbid' = 'to cause to be able/not to be able'; here, the ability of the Subject to cause is based on a special relationship between the social or some other positions of the Speaker and the Addressee;
- (iv) change the perceptive state of the Addressee; thus, the verb *pokazat'* 'to show' may have a meaning of a momentary action causing a change of the perceptive state;
- (v) to make an attempt to influence the volitive state of the Addressee; thus, *poprosit'* 'to ask', *potrebovat'* 'to require', etc. mean 'to make an attempt—with the help of words—to make do'.

As well, the Subject of a momentary action (not necessarily a speech act) has a number of ways to affect himself or herself:

- (i) to change his own volitive state, e.g., *vybrat'* 'to choose <lit. 'to have chosen>', *resit'* 'to solve' (+ Infinitive), *predpočest'* 'to prefer', *sčest'* 'to consider <smb/smth to be smth>', and *peredumat'* 'to change one's mind';
- (ii) to change his own perceptual state, e.g., *predstavit' sebe* and *voobrazit'* 'to imagine' (in contrast to *zametit'* 'to notice', which seems to denote a happening, not an action);

- (iii) to change his own epistemic state, e.g., *dogadat'sja* 'to guess' and *uznat'* 'to recognize', as in *Ja tebjja srazu uznal* 'I recognized you immediately';
- (iv) to change his own deontic state, e.g., *poobeščat'* 'to promise' (according to Wierzbicka's analysis, causation here is based on the idea of damage expected by the Speaker if he does not fulfill his promise made in public).

Momentary acts, unlike result-oriented actions (including Vendler's achievements), do not imply any activity proceeding the transition to the resulting state.

6 Conclusion

We conclude by enumerating types of causation with paraphrases in a natural language (English, but it could also be Russian) where possible:

- intentional unfolding: 'activity of X is leading to the result Y' (as in *zakryvat' dver'* 'to be shutting the door');
- intentional accomplished: 'activity of X has lead to the result Y' (as in *zakryvat' dver'* 'to shut the door');
- intentional with non-complete control (as in *to solve* <the problem>);
- intentional guaranteed (as in *to promise*);
- non-intentional causation as a happening: 'event X evoked the consequence Y' (as in *ogorčit'* 'to make sad');
- non-intentional unfolding: 'factor X caused and maintained a process¹ in Y' (as in *Your pill is quieting me down*);
- non-intentional accomplished: 'factor X caused and maintained a process in Y that reached its inner limit' (as in *Your pill quieted me down*).

Bibliography

- Apresjan, Ju.D. 1974. *Leksičeskaja semantika*. Moscow: Nauka. The English translation appeared as "*Lexical Semantics. User's Guide to Contemporary Russian Vocabulary*", Karoma, Ann Arbor, MI, 1992.
- Apresjan, Ju.D. 1980. *Tipy informacii dlja poverxnostno-semantičeskogo komponenta modeli Smysl •<=>• Tekst* (— Sonderband 1). Vienna: Wiener Slawistischer Almanach.
- Apresjan, Ju.D. 1988. "*Glagoly momental'nogo dejstvija i performativy v rusckom jazyke*". Russistika segodnja.
- Bulygina, T.V. 1980. "*Grammatičeskie i semantičeskie kategorii i ix sv-jazi*". Aspekty semantičeskix issledovanij. Moscow: Nauka.
- Fillmore, C.J. 1968. "*The Case for Case*". Universals in Linguistic Theory ed. by E. Bach & R.T. Harms. New York: Holt, Rinehart & Wilson.
- Gavrilova, V.J. 1990. *Kvazipassivnaja konstrukcija i sistem zalogovyx protivopostavlenij rusckogo glagola*. Moscow: Voprosy Kibernetiki.
- Maslov Ju.S. 1948. "*Vid i leksičeskoe značenie glagola v rusckom jazyke*" Izvestija Akademii nauk SSSR, Serija literatury i jazyka. 7.4.
- Mel'cuk I.A. 1974. *Opyt teorii lingvističeskix modelej "Smysl- Tekst"*. Moscow: Nauka.
- Mel'cuk I.A. & A.K. Žolkovskij. 1984. *Explanatory Combinatorial Dictionary of Modern Russian*. Vienna: Wiener Slawistischer Almanach.
- Paduceva, E.V. 1991. "*K semantike nesoversennogo vida v rusckom jazyke: obščefaktičeskoe i akcional'noe značenie*". Voprosy jazykoznanija. 6.

- Tommola, H.H. 1986. *"Aspektual'nost' v finskom i russkom jazykax"*. Neuvostoliitto instituutin vuosikirja. 28.
- Vendler, Z. 1967. *Linguistics in Philosophy*. Ithaca: Cornell University Press
- Wierzbicka, A. 1980. *Lingua Mentalis*. Sydney etc.: Academic Press.
- Wierzbicka, A. 1988. *The Semantics of Grammar* (= *Studies in Language Companion Series 18*). Amsterdam & Philadelphia: Benjamins Academic Publishers.
- Zaliznjak, Anna A. 1991. *Kontroliruemosit' situacii v jazyke i v žizni—Logičeskij analiz jazyka: Modeli dejstvija*. Moscow: Nauka.