Quantification of Actants and Expression of Diachronic Polysituation in French, English, Russian and Tatar

By

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Abstract

Universal ways of presenting quantification-based polysituation are the number agreement/ disagreement, interval, frequency, verb quantification, etc. realized at the utterance level. This comparative analysis is aimed at revealing similarities and differences in the prototypical instances of expressing diachronic polysituation by the number disagreement in the French, English, Russian and Tatar languages. The prototyping analysis focuses on the most general patterns with no insight into special cases. Comparative analysis of the quantification relevance of various actants considers involvement of the actants in the expression of diachronic polysituation. This research project required consistent solution of three main objectives that outlined our work. First, exemplifying prototypical sentences with action verb predicates, we specified the role of actants with semantically different functions in communication of diachronic polysituation via the number disagreement. Second, we carried out an analysis to identify the role of quantification of object-type actants and the spatial localizer with the algorithm: 1) Object; 2) Instrument; 3) Action Localizer; 4) Situation Localizer; 5) Recipient. Finally, we singled out object-type actants, the quantification of which leads to the representation of diachrony. The study showed that relevance of the quantification of the utterance components when expressing polysituation depends on the remoteness of the actants from the predicate and this characterizes isomorphism of the languages. Allomorphism of the compared languages shows through the quantification of the actant-Object.

Key words: quantification, actants, diachronic polysituation, space localizer, action predicates.

Introduction

Isolated analysis of distributing and iterative properties of verbal actions so far used in language studies cannot fully represent quantification as the category of utterance. This work is first to analyze quantification framework of the utterance as a representation of diachronic or synchronous types of the polysituationality.

S. Tatevosov in his typological study of generic semantics quantifiers (Tatevosov, 1997; Tatevosov, 2002) describes systems of quantifiers in 23 languages, explaining interlanguage variation parameters in quantification and universal limitations of it. Some recent work on quantification could be found in a series of publications in Langue française (No. 2, 2010) joined under "La scalarité", in which they consider quantification in relation to the scale of measurement in P. Hadermann, M. Pierrard, et.al. (2010) and R. Gauchola (2010). For our research, the work of M. Asnès (2008) is of greatest interest.

Representation of verbal semantics as a polysituational structure follows from general

understanding that lack of clear segmentation of situations and their interdependence distinguishes predicative semantics from identifying one. The verb due to metonymic nature of its semantics correlates with polysituational fragment of reality. In verbal semantics, it can be represented in four types: duration, segmentation, quantification, and consituationality (Lebedeva, 2000). Essence of universal quantification is the conceptualization of the spatial-temporal set of homogeneous situations and manifestation of this set with certain language means. Quantification-based polysituationality (or polysituation) is the category of utterance with its own content and expression planes: the semantic dominant conveys distribution of homogeneous situations in space and time; the expression is realized by multi-level means of quantification and their interaction.

Quantificational polysituation involves diachronic (or temporal) Children handed over books/ Deti sdavali knigi (=in sequence) polysituationality and synchronous (or spatial) Children watered the beds/Deti polivali gryadki (=simultaneously) polysituationality. Universal ways of presenting the quantification-driven polysituation is the number agreement/disagreement, interval, frequency and verb quantification realized at the utterance level. The number agreement/disagreement involves correlation of utterance quantificational parameters within the subject-object-predicate situation and the interaction of the subject-object-predicate situation with many external spatial and temporal segments (Lutfullina, 2010; Makhmutova & Lutfullina, 2017).

Methods

For this research, we applied the method of semantic structures of Arto Mustajoki (Mustajoki, 2010). Realization base of the sentence involves two components: actants + predicate. The actant is an essential predicate-related element of the state of affairs necessary to describe the core of the semantic structure. In this study, we consider how quantification of actants creates polysituation, provided that the actants are not the Agent or Subject of the sentence. For this we use types of Objects distinguished by A. Mustajoki :

1)   Object – an actant, to which a specific / non-specific action is directed or which arises as a result of the given action (all categories of actants from the first to the fourth);
2)   Topic – the actant, that is being spoken about (all categories of actants from the first to the fourth);
3)   Recipient – actant who receives something or in favor of which something is being done (only the first category);
4)   Source – actant, from which something passes to the Recipient (obviously, all categories are possible);
5)   Instrument – actant, with the help of which Agent directly does something (all categories of actants, except the first).
6)   Localizer (sirkonstant, actant-place – in Mustajoki's terminology) "indicates a local element that is obligatory for a given state of affairs (obviously, all categories are possible)" (Mustajoki, 2010).

Prototyping of speech phrases allows listing all possible types of actants for each type of action, including redundant ones in terms of speech. The aim of the comparative analysis is to disclose similarities and specialties in prototypical communication, i.e. expression, of diachronic polysituation via the number disagreement. Prototyping means that the most general patterns will be identified with no attention to special instances. Comparative analysis of the relevance of the actants quantification focuses on outlining their involvement in the communication of diachronic polysituation.

Our research objectives are, first, to consider involvement of actants having different semantic functions in communication of diachronic polysituational via the number disagreement exemplifying prototypical sentences with action predicates. In addition to Object-type Actants, the Spatial Localizer is considered; sometimes we refer to it the Localizer. The second step is to identify involvement into quantification of Object-type Actants and the Spatial Localizer in two/ four languages by the following pattern: 1) Object; 2) Instrument; 3) Action Localizer; 4) Situation Localizer; 5) Recipient. Finally, we will qualify what Object-type Actants lead to representation of diachrony.

Results and Discussion

Mustajoki (2010) highlights eight primary classes of predicates: Action, Relation, Possession, Location, Existence, State, Characteristic, and Identification. Actant quantification is more convenient to analyze separately for different classes of predicates, since some problems of semantic differentiation arise when we delineate boundaries in different communicative and semantic domains.

Action verbs are typical ones for expressing relations of distribution. In the primary class of action predicates, there are subgroups that will be considered separately. For action verbs, the required actant is Agent (A), and the following types of actants are acceptable: Object (O), Source (S), Recipient (R), Topic (T), Instrument (I).

Predicates of locomotion in the prototype sentences (Ac Lc) are: Nina va à l'école. Nina goes to school. Nina mäktäpkä bara. Nina idet v shkolu. For this subgroup of locomotion predicates quantification of the Object is irrelevant for expressing diachrony: Nina porte de vieux livres à l'école. Nina carries old books to school. Nina iske kitaplaryn/kitaplarny mäktäpkä iltä. Nina vozit (otnosit) staryye knigi v shkolu. The role of relocated objects is irrelevant, since the they are perceived as a total object of locomotion, whereas the role of the actant-Recipient makes the difference: Il transporte des chaises aux enfants. He carries chairs to children. On vozit stul'ya detyam. Ul balalarga uryndyk tashyj. However, in this case size of relocated objects needs to be taken into account: Il porte des chaises (tables?)/ He is carrying chairs (tables?). Depending on the size of relocated objects, the question arises about the Agent's ability to relocate them as one. If we refer to large objects in the plural then this implies impossibility of relocating them as one object, hence successive relocation is implicated and, thus, diachrony is expressed. Quantification of the Instrument is insignificant; as the distribution of the situations by their localization has already occurred, specifying the Instrument for each situation can be an excessive qualification: Nina est allée aux écoles en moto. Nina went to schools on a motorcycle. Nina, mototsiklga utyryp, mäktäplärne jörep çykty. Nina ob"ezdila shkoly na mototsikle. The quantification of the Instrument – means of locomotion – acquires relevance if only there are no other Objects: Nina est allée aux motos. Nina rode motorcycles. Nina katalas' (proekhalas') na mototsiklakh. Nina mototsikallarda jörde. Locomotion is a telic process, which requires the Spatial Localizer. This process can be distributed in space by places of locomotion: Nina est allée aux écoles. Nina went to schools. Nina obbezhala shkoly. Nina mäktäplärne jörep çykty. Localization of the action is excluded: Il allait en train. He went by train. On ekhal v poezde. Ul poezda bardy, since it already involves the Subject. Additional specifications regarding means of locomotion and possible objects of relocation are secondary. Isomorphism of the compared languages in the communication of polysituation features the following relevance of some utterance elements: 1) quantification of the Recipient is relevant; 2) quantitative qualification of the Instrument is salient if there are no other actants; 3) quantification of the Spatial Localizer is primary and significant.

Allomorphism is that in the Tatar language, relocated objects cannot signal distribution of process, as the question of their quantification remains open: Ul uryndyk tashyj (beräm-beräm? uryndyklar tashyj?). In French, English and Russian, salience of the quantified Actant-Object to be relocated is dependent on the correlation of the transporting capabilities of the Agent and the size of the object to be relocated.

Prototypical sentences expressing physical action (Ac Phys) are: Ygor a tué une mouche par la attrape-mouche. Igor slapped (killed) a fly with a flyswatter. Igor' ubival mukh v komnatakh. Igor çeben ütergech belän çeben üterde. In this subgroup, one can express the distribution of the action over the objects: Ygor a tué des mouches. Igor killed flies. Igor' ubil mukh. Igor çeben üterde. Quantification of the Instrument is relevant if there are no other objects, in other cases it is merely specification of the Instrument for each action: Ygor a signé par les stylos de ses amateurs. Igor signed with pens of fans. Igor' podpisyvalsya avtoruchkami poklonnikov. Igor imzasyn talantyna baş iyuçelärneñ ruçkalary belän kuidy. Physical action is a process directed at something and taking place somewhere. If the object does not carry an unambiguous idea of distribution, the role of the Localizer increases: Ygor a tué des mouches dans les chambres. Igor killed flies in the rooms. Igor' ubival mukh v komnatakh. Igor bülmälärdä çeben üterde. The sentence He killed flies on the walls, localizes the action, not the whole situation. In this subgroup, it is possible to quantify the recipient object with representation of distributive relations: Ygor jettait des boules de neige aux Bonhommes. Igor threw snowballs at snowmen. Igor' kidalsya snezhkami v snegovikov. Igor kar yomarlamnaryn kar babaylarga atyp uynady. In the compared languages, communicating diachrony with the verbs of physical action requires the quantification of the Localizer, while the quantitative qualification of the Instrument comes into focus if there are no other actants. Allomorphism comes out in the case of the Actant-Object. In French, Russian and English its quantification is significant and dominant, since there is distribution of the action by the Objects: Ygor a tué des mooches. Igor killed flies. Igor ubival mukh. In the Tatar language, the Object is irrelevant for expression of the polysituation: Igor çeben üterep jörde.

Prototypical sentences with predicates of intellectual action/activity (Ac Int) are: Il pensait à son enfant. Victor thought about his child. Viktor dumal o svoem rebenke. Ul balasy turynda ujlyj ide. In intellectual actions, quantification of the actant-Topic is irrelevant. Intellectual activity is a process that implies some result. Atelic intellectual actions acquire features of completeness with object-Resultant: Il écrit des livres. He writes books. Viktor pishet knigi. Ul kitap yaza; therefore its quantification is important, although the plural is often used with the view of characterization. If there are no other actants, quantification of the Instrument becomes relevant: Il a dessiné aux crayons. He drew with pencils. On narisoval karandashami. Ul karandaşlar belän räsem yasady (qualification is neutralized by referential meaning of the tense form). If telicity of the intellectual action is object-dependent, distribution of the action is realized as per Spatial Localizers or Actants-Recipients: Victor dessinait des esquisses pour les amateurs de peinture dans les villes. Victor painted pictures for art lovers in many in cities. Viktor pisal kartiny dlya lyubitelej zhivopisi vo mnogikh gorodakh. Viktor küp şähärlärdä sängat yaratuçylar öçen buyau belän räsem yasap jöri ide. However, spatial segmentation of atelic action is possible if there is Spatial Localizer: Il dessinait dans les villes. He painted in the cities. On pisal kartiny v gorodakh. Ul şähärlärdä räsem yasap jöri ide or only Recipient: Il dessinait pour les amateurs de peinture. He painted for art lovers. On risoval dlya lyubitelej zhivopisi. Ul keşelärgä räsem yasap jöri ide. Quantification of Recipient often makes impossible expression of diachrony for verbs of intellectual and social action, which initially assume collective Actant-Recipient. In the four languages, if the verb of intellectual action has Object-Resultant, this ensures telicity of the action; quantification of the actant-Instrument

comes into focus if there are no other actants. Quantification of the spatial localizer is secondary. A non-material actant-Resultant (song) often implies time interval (e.g. composing process). In French, English and Russian, quantification of the object-Resultant is involved in expression of polysituation: Il écrit des livres. He writes books. On pishet knigi, while for the Tatar language, the plural form of the object-Resultant is not characteristic: Ul kitap yaza.

Prototypical sentences with speech action predicates (Ac Sp) are: I spoke for a long time about the fate of my mother. I talked to the kids. I read poems about distant seas to the kids. In speech actions, quantification of object-Recipients (to the kids) and object-Topics is irrelevant – about distant seas (provided there is no clear distinction between topics: the first topic, the second, etc.). In speech activities, quantification of non-material objects-Resultants is important: J'ai chanté des chansons. I sang songs. YA spel pesni. Min (žyr, bäet) žyrladym. Non-material objects-Resultants can have an inherent temporal segment implying the situation of a song performance: a song is about two or three minutes. The plural form of the object-Instrument does not represent a polysituational context: Ya govoril v rog / mikrofony. I spoke into a horn / microphones. Quantification of the Localizer is predominant when communicating polysituation: J'ai chanté dans les écoles. I sang in schools. YA vystupal (pel) v shkolakh. Min mäktäplärdä žyrlap jördem. In the compared languages, quantification of Resultant and Localizer is significant for verbs of speech action, whereas localization of the action is impossible. The difference is that French, English and Russian require quantification of non-material Resultant: J'ai chanté des chansons. I sang songs. YA pel pesni, while in the Tatar language Resultant is perceived as an integral component of action and, thus, is indifferent to number differentiation: Min bäet žyrladym = Min bäetlär žyrladym.

Victor a donné des livres aux enfants dans les écoles. Victor gave books to children in schools. Viktor razdal detyam knigi v shkolakh. Viktor balalarga mäktäplärdä kitap taratty is the prototypical sentence with an action predicate causative of (non-) possession (Ac Ps). Quantification of the object is relevant in case there are no other actants and is involved in qualification: Victor donne des livres. Victor gives books. Viktor razdaet knigi. Viktor kitap tarata. Due to the quantitative qualification of Recipient, distribution of the action by Objects can be expressed. Quantitative determination of the Object loses its salience if Localizer is single: Victor a donné des livres dans cette maison. Victor gave books in this house. Viktor razdal knigi (knigu) v ehtom dome. Viktor bu öjdä kitap taratty, as well as if Recipient is single: Victor gave the books to the child. Viktor dal knigi rebenku and if Recipient is plural, since distribution of the situations by Recipients has already occurred, reference to a separate Object is considered insignificant qualification, which is not morphologically expressed in the Tatar language: Victor a donné des livres (un livre) aux enfants. Victor gave books (a book) to children. Viktor balalarga kitap taratty. Viktor daval detyam knigi (knigu). Quantification of the localizer is relevant for all action predicates: Victor a donné des livres dans les écoles. Victor gave books to schools. Viktor mäktäplärdä kitap (kitaplar) taratty. Viktor razdaval knigi v shkolakh, at which quantification of the object is redundant information, Victor handed out books (book) in schools. Object is required for this type of action. Dominance of utterance components when expressing diachrony is semantically determined by their remoteness from the predicate: closer is Object, further – Recipient, still further – Localizer. The quantification of other closer actants is nothing but further qualification. For a given subtype of predicates in the compared languages, quantification of Recipient and the Localizer is relevant, whereas quantitative qualification of Object is irrelevant when the latter are quantified and becomes important in the absence of other actants. If in French, Russian and English quantification of Object is important when there are no other actants: Victor donne des livres, in the Tatar language Object is frequently not subject to quantification: Victor kitap tarata. In the Tatar language, qualifying a particular object of the situation is irrelevant and morphologically unmarked: Victor balalarga kitap taratty.

The prototypical sentence with a predicate of social action (Ac Soc) is: Victor a puni des enfants pour les voles. Victor punished children for thefts. Viktor nakazal rebenka/detej za krazhu.Viktor balalarga urlaşkan öçen žäza birde. Quantification of Object is relevant and determines expression of a series of diachronic situations: Victor chargeait les enfants des commissions. Victor gave the children the tasks. Viktor razdaval porucheniya. Victor balalarga yomysh kuşa ide. Quantification of the Recipient-actant is insignificant: Victor a puni des enfants. Victor punished the child (children). Viktor nakazal rebenka (detey). Victor balalarga žäza birde. Social action implies an impact on one person as well as on a community, i.e. it features social orientation and originally involves a communal actant-Recipient. Quantification of the object-Topic is irrelevant: Victor a puni des enfants pour les voles. Victor punished children for the theft (thefts). Viktor nakazal detej za krazhu (krazhi). Urlaşkan öçen Viktor balalarga žäza birde. Predicates of social action can potentially be subject to distribution in space following the general rule of quantification of Localizer: Victor punissait des enfants dans leurs chamdres. Victor scolded the children for disobedience in the classrooms. Viktor balalarny bülmälärendä tyñlamagan öçen açulana ide. Viktor otchital detej za neposlushanie v kabinetakh. This subclass of predicates in the compared languages reveals isomorphism as to the formula: L (Quant is relevant), showing salient quantification of Localizer. Difficulty of the analysis is in assumption of abstract actants of the fourth category, which imply temporal interval for process realization (e.g., process of punishment implies some time). French, English and Russian tend to mark quantification of the object: Victor chargeait (les enfants) des commissions. Victor gave (the children) the tasks, whereas the singular form of the Tatar language traditionally allows for ambiguity of interpretation Viktor yomysh kusha ida (Did Viktor give a task or tasks?).

The following is presented as the prototype sentence with the predicate of physiological action (Ac Phl): Nous prenaient une douche avec des savons de toilette dans les salles de bain. We took a shower with soaps in the bathrooms. My mylis' v dushe s mylom. Bez duşta sabyn belän yuyndyk. We washed in the shower with soap. Nous avons pris un bain de vapeur avec des balais. We took a steam bath with besoms. Bez munçada millek belən çabynyp yuyna idek. My parilis' v banyakh s venikami. Quantification of the actant-Object dominates, if it is not a reference to non-independent actant-Objects belonging to the actant-Agent (He washed (his) hands): Victor mangeait des pommes, un pomme. Victor ate apples, an apple. Viktor el yabloki, yabloko. Viktor alma ashady. The quantifying parameter for the object-Instrument is merely specification of the Instrument for a particular situation: Victor ne mangeait qu'à l'aide des cuillères et des couteaux. Victor ate only with forks and knives, a fork and a knife. Viktor kushal tol'ko s pomoshh'yu vilok i nozhej, vilki i nozha. Viktor çäneçke häm pyçak belän genä aşyj ide. Quantification of Spatial Localizer tend to have prime relevance for this subtype of action predicates: Victor prenait ses repas aux restaurants. Victor ate in restaurants. Viktor restoranda aşyj ide. Viktor yel v restoranakh. In both languages, expression of diachrony with verbs of physiological action is determined by quantification of actant-Object and Localizer. The inference regarding inability to express diachrony in case of objects-parts of the Subject's body is also valid for verbs of physical action: Andrien serra ses poings. In French, English and Russian quantification parameter of actant-Object (Victor mangeait des pommes, un pomme) and Spatial Localizer (Victor prenait ses repas aux restaurants) is dominant, while in the Tatar language their quantification is not required and cannot unambiguously express diachrony: Viktor alma aşady. Viktor restoranda aşyj ide.

Table 1 gives English examples as the language of description and illustrates isomorphic features of the compared languages. The column with actant-Object shows its potential for communicating polysituation, which is verbalized in French, English and Russian and is not expressed in the Tatar language.

Table 1. Saliency of actants and the spatial localizer in the expression of the polysituation at the utterance level (Order of actants in the sentence is not saved)

Predicate type	Object-type actant / sirconstant				
	Object	Instrument	Recipient / Source	Topic	Localizer
Predicate of Locomotion	(size of Object)				
Nina delivers	books	took buses on a motorcycle	from vendors	–	to libraries.
Predicate of physical action					
Nina threw Nina killed	snowballs flies	with shovels with fly swatters	at snowmen –	– –	in the yards. on the walls. in the rooms.
Predicate of intellectual action					
Nina drew	pictures	with colored pencils	for customers	* about distant seas	in albums. in cities.
Predicate of speech action					
Yana sang	songs	* into microphones	* children	* about giants	in schools.
Predicate of actions causative of (non-) possession					
Nina handed out bought	books books	in baskets	to children	*about countries	in schools. in shops.
Predicate of social action					
Yana punished	children	with rods	–	*for thefts	in their rooms
Predicate of physiological action					
Yana cleaned	ears	with cotton swabs	of children	–	in the baths.
* The asterisk denotes actants irrelevant for expression of distribution.					

Summary

Isomorphism of the compared languages is in the fact that relevance of the quantification of utterance components in communicating polysituation increases as the

distance from the predicate increases: the closest one is Object, further is Recipient, etc.; and Spatial Localizer closes the actant group. Quantification of the remaining closer actants merely specificates polysituational relations expressed by more distant actants. Salience in quantification of the object-type actants for expressing diachrony is the same for the expression of synchronicity through multi-subjectness and the number agreement, i.e. what is to be distributed is similarly distributed among the sets. Any action takes place somewhere, i.e. it is localized, and usually there is Instrument for the action, Object of the action or Recipient. Quantification of Spatial Localizer is salient for all action predicates. Allomorphism is in quantification of actant-Object. The French, English and Russian languages explicitly communicate plurality of actants consistently with the plurality of situations. The Tatar language assumes logical reconstruction of the quantity of Actants-Objects according to quantification of Subject, other actants or Spatial Localizer. In the Tatar language, the actant-Object is treated as part of the predicative (it is included in it), and not as an object distributed by situations. Perhaps the nominal group with generic non-referential status is characteristic of actant-Object. In the Tatar language, logical reconstruction of the quantity of Spatial Localizers for verbs of physiological action are allowed.

Conclusions

Thus, the study showed that relevance of the quantification of the utterance components when expressing polysituation depends on the remoteness of the actants from the predicate and this characterizes isomorphism of the languages. Allomorphism of the compared languages shows through the quantification of the actant-object.

Acknowledgements

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Biography

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