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Slavic Linguistics

in a Cognitive Framework

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The Russian instrumental-of-comparison: constructional approach

Ekaterina Rakhilina and Elena Tribushinina

1. Introduction

The Russian instrumental case is notoriously polysemous. It counts about twenty meanings including an instrumental meaning (e.g. *kopat' lopatoj* 'dig with a spade'), an agentive meaning (e.g. *sdelan Petrom* 'made by Peter'), a comitative meaning (e.g. *s čemodanom* 'with a suitcase'), a locative meaning (e.g. *idti polem* 'walk through the fields'), a temporal meaning (e.g. *večerami* 'in the evenings'), a comparative meaning (*vyt' volkom* 'howl like a wolf') and others. Several attempts have been made to provide a unified account of case in general and of the Russian instrumental in particular (e.g. Jakobson 1936; Janda 1993; Mrázek 1964; Panov 1999; Rakhilina 2000; Wierzbicka 1980). Most of them take the argument structure of the predicate as a starting point for description. An alternative, noun-centred approach to the Russian instrumental was put forward by Rakhilina (2000); see also Panov (1999).

This paper will reflect upon these two major approaches to the instrumental case and assess them by focusing on one specific type of instrumental – a so-called *instrumental of comparison*. We will then propose a new integrated approach to instrumentals inspired by construction grammar (Fillmore et al. 1988; Goldberg 1995, 2006; Lakoff 1987).

The paper begins with an overview of the verb-centric and noun-centric models of case (Section 2). In section 3, we argue that construction grammar provides a very fruitful way of analyzing the Russian instrumental. Section 4 gives a detailed description of the instrumental of comparison within the constructionist framework. In Section 5, we summarize the main findings and present the conclusions from this study.

2. Theoretical background

2.1. Verb-centric approaches to case

The first attempt towards a unified account of case was Jakobson (1936). Jakobson's primary objective was to distinguish the instrumental case from the other cases using three basic features. Within this paradigm, the invariant meaning of the instrumental is constituted by the features '+marginal', '-quantified' and '-directional'. Marginality highlights the object's peripheral relation to the described action; quantification involves the degree of the object's participation in the action; and directionality concerns the direction of an

action towards the object. Notice that all these features are verb-related. Jakobson's theory of case is therefore a prime example of a verb-centric view of case.

The approach advocated by Jakobson (1936) can elegantly distinguish between different cases, but is not able to say much about the variety of specific uses of the instrumental. Later studies have tried to fill this gap by focusing on various uses of the instrumental case. Mrázek (1964), for example, presents an elaborated analysis of nineteen (seemingly unrelated) meanings of the instrumental.

Another key publication about the Russian instrumental case is Wierzbicka (1980). Unlike Jakobson (1934), Wierzbicka pays a lot of attention to the particular senses of the instrumental case. She also refutes a feature-based approach and suggests using metalinguistic definitions of the following type:

'Something happened to Y
because something happened to IN
because X did something.' (p. 6)

Crucially, this definition is intrinsically verb-centred too. It enriches the verb schema with the semantic roles of an agent (X), a patient (Y) and an instrument (IN). However, just like Jakobson's theory, it does not predict which nouns can (or cannot) be used in the instrumental form with a particular meaning (instrument, time, location, etc.).

Janda (1993) presents a cognitive semantic view of the instrumental case. Her major goal is to provide a unified description of various meanings of the Russian instrumental. To this end, she uses four image-schemas with the "conduit instrumental" (instrumental of means) as a prototype. This is how Janda schematically presents the conduit meaning of the instrumental:

NOM =====> INSTR =====> ACC

This schema shows that the action is directed towards the instrument, although the instrument is not the main participant, but only a conduit between the agent and the patient. Generally, what such schemas do is capture a relation of various roles to the head predicate. In this sense, Janda's case schemas, like Wierzbicka's definitions, are essentially a reinterpretation of Jakobson's predicate-argument structure.

2.2. Noun-centric hypothesis

An alternative to the verb-centred view of case is the so-called *noun-centric hypothesis* introduced in Rakhilina (2000). This hypothesis posits that case cannot be reduced to or completely predicted by verb semantics (cf. Kuryłowicz 1949) and that lexical semantics of nouns should play a key role in the description of case (cf. Panov 1990, 1992, 1999).

Recall that the Russian instrumental has about twenty senses. If the argument structure of the verb was the only factor determining the contextually relevant meaning of an instrumental form, then every noun in the instrumental case taken in isolation would be ambiguous and have about twenty different interpretations ('means', 'time', 'location', 'agent', etc.). This prediction is, however, not confirmed by the natural language data, where nouns seem to be associated with one particular instrumental meaning. The instrumental form *palkoj* (stick-INS), for instance, is unambiguously interpreted as denoting an instrument. In contrast, *lesom* (forest-INS) is most likely to be the locative instrumental, whereas *bantikom* (bow-INS) is unequivocally interpreted as denoting similarity in shape. Although unexpected from the verb-centric point of view, this pattern is perfectly explicable. Every noun is associated with a particular taxonomic class, which determines the role of the described object in a situation and thereby shapes the situation itself (cf. Panov 1999: 198). When processing an instrumental noun taken in isolation, we mentally reconstruct the predicate and interpret not the noun as such, but the whole construction. Which predicate will be reconstructed (and, thus, which interpretation will be assigned to the instrumental form) depends on the lexical semantics of the noun. An axe is a tool; therefore *toporom* (axe-INS) is straightforwardly assigned an instrumental meaning. A forest is a location; the form *lesom* (forest-INS) is then naturally interpreted as a locative instrumental. In the same vein, night is a temporal notion, and the instrumental form *nočami* (nights-INS) is unequivocally understood as a temporal instrumental.

Importantly, the range of predicates associated with a given noun in the instrumental case is very restricted. Due to the specific semantics of the noun, a whole panoply of predicates can in principle never be evoked by that noun. Take, for instance, the noun *palka* 'stick'. It is possible to say <*muravej polz*> *po palke* 'the ant crawled along the stick' just as it is possible to say <*mal'čik šel*> *po polju* 'the boy walked across the field'. Notice, however, that only the instrumental form *polem* (field-INS) is possible in this context, but not **palkoj* (stick-INS), since a field is a location and a stick is a tool.

This explanation may give the wrong impression that the lexical meaning of the noun is the only factor determining which meaning will be assigned to a particular instrumental

form. The situation is, however, more complex. First, the semantics and the grammatical properties of the verb are certainly important too. Some verbs, for example, obligatorily take nouns in the instrumental, irrespective of the nominal semantics (e.g. *vosxiščat'sja toporom / lesom / nočami* 'to admire an axe / a forest / nights'). Second, each kind of instrumental construction itself has a conventionalized meaning which is not equivalent to the sum of the constituent meanings. In the following section, we will briefly consider an example of such constructional meaning and propose a theoretical account which can neatly accommodate these phenomena.

3. Constructional meaning

Natural languages often witness a phenomenon which might be termed *multiple taxonomy*. The same noun may be used to profile different aspects of the object of conceptualization and may therefore be expected to function with various instrumental meanings. Take, for instance, the noun *pojezd* 'train'. It can be conceptualized as a means of transport and at the same time a sort of location (for animate and inanimate objects). Since both these meanings can be expressed by means of the Russian instrumental case, we may expect the instrumental form *pojezdom* to be ambiguous and felicitous in both transport and locative constructions, as in *exat' pojezdom* 'travel by train' (means of transport) and *idti pojezdom* 'walk through the train' (location). This is, however, not the case. The instrumental form *pojezdom* is unambiguously interpreted as denoting a means of transport. The locative construction **idti pojezdom* 'walk through the train' is unacceptable.

An important question to ask is why a noun which *does*, in fact, denote a location (*pojezd* 'train') cannot be used in the locative instrumental. A closer scrutiny reveals that the answer should be sought in the nature of the instrumental constructions. We would like to claim that the construction which has been traditionally called *locative instrumental* is, in fact, much more specific in its meaning. Constructions such as *idti polem* 'walk through the field' and *exat' lesom* 'ride through the forest' denote a type of route rather than a location. Furthermore, it should be an established, recognized route through a larger space, such as a field or a forest. Together with a motion verb, the instrumental of route denotes a purposeful movement to a specific endpoint. Authentic examples from the Russian National Corpus (henceforth RNC) include, for instance, *exat' beregom* 'ride along the shore', *idti bolotami* 'walk through the swamps', *idti bul'varom* 'walk along the boulevard', *bežat' krajem lesa* 'run along the edge of the wood', *exat' lugom* 'ride through the

meadows’, *vezti morem* ‘transport by sea’. Importantly, all these cases evoke a fixed (i.e. recognized) trajectory across a larger area (swamps, meadows, sea, etc.).

Notice that the combination *guljat’ polem* ‘stroll through the fields’ is odd, since there is neither a fixed route nor a purposeful movement involved. In contrast, all motion verbs preceding *pole-INS* in the RNC denote purposeful movement along an established route: *bežat’* ‘run’, *vozvraščat’ sja* ‘return’, *dvinut’* ‘start off’, *ezdit’* ‘travel, ride’, *idti* ‘walk’, *krast’ sja* ‘sneak’, *pereletet’* ‘fly over’, *polzti* ‘crawl’, *pomčat’ sja* ‘dart’, *ponestis’* ‘rush along’, *pustit’ sja* ‘set out’, *taščit’* ‘drag’, *taščit’ sja* ‘drag oneself along’, *sledovat’* ‘follow’. Similarly, **plyl okeanom* (sailed ocean-INS) ‘sail across the ocean’ and **letel ne-bom/vozduxom/kosmosom* (flew sky/air/space-INS) ‘fly through the sky/air/space’ are infelicitous, since there is no fixed route across these spaces.

Further, the instrumental is not used in cases where a route is not made explicit, but is pre-determined by the topological properties of the described entity. For this reason, the noun *reka* ‘river’ is very rare in the route-instrumental construction: there are only 5 instances in the RNC (cf. 56 cases with *morem* ‘sea-INS’ and 51 cases with *polem* ‘field-INS’). Furthermore, as is evident from examples (1)–(5), these uses are quite old: the most recent one is from 1913.

- (1) *Kegress pokazyval novyj avtomobil’, kotoryj proxodit po vsjakoj mestnosti.*

Kegree showed new automobile which passes on any area
Projexali dal’še i lesom spustilis’ k našemu mestu u Dnepra.
 travelled further and forest-INS went.down to our place at Dnieper
Pokatal’sja s Grabbe v dvojke. Vernulis’ rekoju k
 rode with Grabe in carriage.and.two returned river-INS towards
 6 čas. (Nicholas II. Diary, 1913–1916)

6 hours

‘Kegree showed his new car that could drive on any type of road. We drove further through the forest and got down to our place by the Dnieper. I rode a carriage-and-two with Grabe. We got back by the river around 6 o’clock.’

- (2) *Čuvaš možet vseгда pet’ éksromptom: jedet lesom — vospevajet*
 Chuvash may always sing impromptu drives forest-INS sings.of

les, edet rekoju – vospevajat reku i skladyvajet v pesni raznyje
forest drives river-INS sings.of river and puts.together in songs various
byli i nebylicy. (N.D. Telešov, 1892)

facts and tales

‘A Chuvash can always sing impromptu. Travelling through the forest he sings of the forest, travelling by the river he sings of the river and puts together true stories and tall tales.’

- (3) *On exal rekoju Dvinoj bez ostanovki do Sijskogo*
he travelled river-INS Dvina-INS without stop until Siysky
monastyrja. (Pavel Nikolajevskij, 1885)

monastery

‘He travelled non-stop by the Dvina river to the Siysky Monastery.’

- (4) *Ermak s obetom dobresti i celomudrija, pri zvuke trub*
Ermak with vow valour and chastity at sound trumpets
voinskix, 1 sentjabrja 1581 goda otpyl rekoju Čusovoju k
military 1 September 1581 year set.sailing river-INS Čusovaja-INS towards
goram Ural’skim, na podvig slavy, bez vsjakogo sodejstvija, daže
mountains Ural on feat glory without any assistance even
bez vedoma gosudareva. (N.M. Karamzin, 1816–1820)

without knowledge tsar

‘On 1 September 1581, having made a vow of valour and chastity, Ermak set sailing by the Chusovaya river towards the Ural mountains. Accompanied by the sound of soldiers’ trumpets, he left for his feat of glory, without any assistance and without even letting the tsar know of his departure.’

- (5) *Mitropolit ot Vyšnego Voločka pyl rekoju Mstoju do*
metropolitan from High Volochok sailed river-INS Msta-INS as.far.as
Novagoroda, gde, ravno kak i vo Pskove, duxovenstvo i
Novgorod where equally like and in Pskov clergy and
graždanstvo iz’javilo userdnuju k nemu ljubov’ darami i
civilians expressed zealous towards him love gifts and
piršestvami. (N.M. Karamzin, 1809–1820)

feasts

‘The metropolitan sailed by the Msta river from the High Volochok to Novgorod where, just as in Pskov, the clergy and civilians expressed their great love to him with gifts and feasts.’

Bearing the above discussion in mind, it is not difficult to explain why **idti pojezdom* ‘walk through the train’ is infelicitous. Even though the noun *pojezd* has a locative meaning and the verb *idti* is a motion verb and even though it is possible to walk from the front to the back of the train (or the other way around), it is certainly not a fixed route through a larger space.

The above discussion clearly demonstrates that the nature of the verb+instrumental construction cannot be reduced to a grammatical rule for combining atomic syntactic units into a complex phrase. It is not the case that a combination of any locative noun with any motion verb will automatically result in a route instrumental. The route instrumental, just as the other instrumentals, is a conventionalized pairing of form and function (cf. Croft 2001; Fillmore et al. 1988; Fillmore and Kay 1993; Fried and Boas 2005; Goldberg 1995, 2006; Michaelis 2004; Michaelis and Lambrecht 1996). The constituents partly determine the meaning (or rather the domain) of the instrumental construction. For instance, the combination of *idti* ‘walk’ with the instrumental form *polem* ‘field’ evokes a locative domain, whereas the combination with another noun in the instrumental case (e.g. *nočami* ‘nights’) profiles a different domain of the instrumental case (temporal). However, the construction also contains information that is not found in the constituent parts and therefore imposes restrictions on verb-noun combinability. The route instrumental construction, for instance, denotes a purposeful movement along a fixed route through a larger space. This construction-specific semantics explains why *idti polem* ‘walk through the field’ is felicitous, whereas *??guljat’ polem* ‘stroll through the field’ and **idti pojezdom* ‘walk through the train’ are odd. Similarly, if the instrumental case were purely compositional (i.e. words combined by rules), we would not be able to predict the restrictions of the type *??plyt’ rekoj* ‘sail by river’ and **letet’ nebom* ‘fly by sky’. Thus, the semantics of the instrumental construction largely relies on the low-level meanings of the specific nominal and verbal constituents, but is not directly predictable from the general rules of morphology, syntax and semantics, since the construction as a whole also has a meaning (e.g. purposeful movement along a fixed route through a larger space). The data in this study therefore support the idea put forward within the framework of *construction grammar* that there is no

clear-cut borderline between grammar and lexicon; rather there is a syntax-lexicon continuum (Fillmore et al. 1988; Goldberg 1995, 2006; Jackendoff 2002). A similar approach to case may be found in Barðdal (2008, 2009a, 2009b).

In what follows, we will zoom in on one specific construction from the family of Russian instrumental constructions – the instrumental of comparison. We will compare this construction with the more general *kak*-similative in order to describe the construction-specific meaning of the instrumental of comparison.

4. The instrumental-of-comparison construction

4.1. Form

The instrumental-of-comparison (IoC) has two formal realizations: a stative nominal construction (implying the predicate verb *byt'* ‘be’) as in (6) and a verbal construction usually containing a dynamic predicate as in (7).

- (6) *U tebjā mogut byt' pyšnyje volosy, kak u Bejonse, zadumčivyye glaza, kak u Ališi Kis, i gubki bantikom, kak u Andželiny Džoli. (Tvoj kurs, 2004.11.10)*

Angelina Jolie

‘You may have luxuriant hair like that of Beyoncé, thoughtful eyes like those of Alicia Keys and a Cupid’s bow like that of Angelina Jolie.’

- (7) *Nikto iz nix ne letel kamnem – vse opuskalis' zamedlenno.*
none from them NEG flew stone-INS all went.down slowly
(L. Ulitskaya, 2000)

‘None of them dropped like a stone; they all got down slowly.’

Like other comparative constructions (equatives and similatives), the IoC usually consists of four elements: a comparee (topic of comparison), a standard of comparison, a standard marker (pivot, marker of comparison) and a parameter (Cuzzolin and Lehmann 2004; Haspelmath and Buchholz 1998). A comparee can be expressed by the head-noun of the IoC (*gubki* ‘lips’ in example 6) or the subject of the sentence (*nikto* ‘nobody’ in example 7). A standard of comparison is expressed by the noun in the instrumental case: *bantik* ‘bow’ in

(6) and *kamen* ‘stone’ in (7). The standard marker in the IoC is the instrumental morpheme. A parameter is usually not expressed overtly in the IoC construction: in (6) the parameter is shape, and in (7) it is a manner of motion.

4.2. Content

4.2.1. *The IoC and the kak-similative*. Wierzbicka (1980: 86) defines the semantics of the IoC construction in the following way:

‘I say: imagine Y (IN),
because I want you to be able to imagine X’

Applying this definition to the sentence *Kolesom za sini gory solnce krasnoje skatilos*’, we arrive at the following definition: ‘I say: imagine a wheel, because I want you to be able to imagine the sun’ (cf. Turovskij 1988: 137; Zalizniak 1996: 172). Such definitions, however, cannot predict the semantic and combinatorial restrictions in the IoC construction. Nor can they account for the differences between the IoC construction and an apparently synonymous construction with *kak* (e.g. *kruglyj kak koleso* ‘as round as a wheel’). In the remainder of this section we will present a constructional analysis of the IoC. We will argue that a constructionist approach has a significant predictive power and is able to solve the problems of the earlier approaches.

As mentioned above, the IoC is seemingly very much like the similative *kak*-construction. An initial look at the distributional properties of the two constructions gives an impression that that the *kak*-construction is very broad in meaning and can be used in all cases where the IoC is used. By way of illustration, see examples (8)-(11), where (a) sentences contain IoC constructions and (b) sentences their similative *kak*-counterparts:

- (8a) *Udaril vypjativšijsja iz-za sosny mesjac v devič’je lico, i Petr*
struck protruded from pine.tree moon in maiden face and Petr
Kirilyč xorošo vidit slezinki vo vpalyx ščekax i grud’ doskoj,
Kirilych well sees tears in hollow cheeks and breast-NOM board-INS
i sarafan takoj že goluboj i s kolokol’čikami po podolu
and sarafan such PCL light.blue and with bells on hem
i po grudi, tol’ko visit on slovno na palke.
and on breast only hangs 3.SG.M as.if on stick
(S.A. Klychkov, 1926)

‘The moon protruded from a pine-tree and lit the girl’s face. And then Petr Kirilych could clearly see the tears on her hollow cheeks and a flat breast. Her sundress was also blue, with bells along the hem and the breast, but the dress was hanging like on a stick.’

- (8b) “*Grud’, kak doska, zadu i sovsem net*”, – *podumala Katerina*.
breast like board bottom and entirely NEG thought Katerina
(P.S. Romanov, 1928)

‘Her breast is as flat as a board, the bottom is absent all together, Katerina was thinking.’

- (9a) *Letela streloj Stal’naja, vovsju staralas’*.
flew arrow-INS Stalnaya as.hard.as.one.can tried
(I.S. Shmelev, 1927–1944)

‘Stalnaya flew like an arrow, she did her utmost best.’

- (9b) *Gody leteli kak strela. Dni tjanulis’ kak smola*. (O.S. Minor, 1933)
years flew like arrow days dragged like pitch
‘Years flew like an arrow. Days dragged like pitch.’

- (10a) *I boli togda takije, čto gotov revet’ korovoj*.
and pains then such that ready howl cow-INS
(R. Ungern, 1926–1938)

‘And the pain is then so strong that you can howl like a cow.’

- (10b) *Ja nalivaju sebe polstakana kon’jaku, vypivaju i, položiv golovu na ruki, revu, kak korova*. (V. Voinovich, 1999)

arms howl like cow

‘I pour some cognac for myself, drink it all, put my head on my arms and howl like a cow.’

- (11a) *Smotrju, moj sidit, vse lico v gari, i rža v borode ot železa*.
look my sits all face in cinders and rust in beard from iron

Gljadit volkom. (B.S. Zhitkov, 1924)

looks wolf-INS

‘I see my husband sitting, his whole face is covered with cinders, his beard with iron rust. He is looking like a wolf.’

(11b) *Pritom že èto členy Dumy – narod pokuda ešče dikij,*

besides PCL this members Duma people still yet wild

nepriručennyj... gljadjat, kak volki, i, vidimo, sovsem ne ponimajut,

untamed look like wolves and apparently totally NEG understand

čto značit – Car’! (M. Gorky, 1906)

what means tsar

‘And in addition to that, the members of the State Duma are still wild and untamed. They look like wolves and seem not to understand what it means to be a tsar!’

The reverse is, however, not the case. It is only a limited number of *kak*-constructions that can be substituted by the IoC. Witness examples (12)–(14):

(12a) *Nočevali v izbuške jegerja Dormidonta, predannogo baram s*

spent.night in hut huntsman Dormidont devoted masters from

malyx let, kogda sam on, Volodja Greve, prjataljsja na senovale,

small years when self he Volodya Greve hid on hayloft

droža, kak zajac. (L.S. Sobolev, 1932–1962)

trembling like hare

‘They spent the night in the hut of huntsman Dormidont who had been devoted to his masters since his childhood when even Volodya Greve himself was hiding in the hayloft trembling like a rabbit.’

(12b) **Nočevali v izbuške jegerja Dormidonta, predannogo baram s*

spent.night in hut huntsman Dormidont devoted masters from

malyx let, kogda sam on, Volodja Greve, prjataljsja na senovale,

small years when self he Volodya Greve hid on hayloft

droža zajcem.

trembling hare-INS

(13a) *On priletel v Moskvu. My obnjalis' kak brat'ja.* (N. Burlyayev, 2003)
 he arrived in Moscow we embraced like brothers
 'He arrived in Moscow. We embraced like brothers.'

(13b) *On priletel v Moskvu. *My obnjalis' brat'jami.*
 he arrived in Moscow we embraced brothers-INS

(14a) *Tol'ko kogda ix glaza vstretilis', oni pali drug drugu v ob''jatija*
 only when their eyes met they fell each other in arms
i zarydali, kak malyje deti. (M. Volkova, 2000)
 and started.crying like small children
 'Only when their eyes met, they fell into each other's arms and started crying like small children.'

(14b) **Tol'ko kogda ix glaza vstretilis', oni pali drug drugu v ob''jatija*
 only when their eyes met they fell each other in arms
i zarydali, malymi det'mi.
 and started.crying small-INS children-INS

It is well-established that languages tend to avoid constructional synonymy. One of the basic principles of construction grammar – the *Principle of No Synonymy* – holds that “if two constructions are syntactically distinct, they must be semantically or pragmatically distinct” (Goldberg 1995: 67). If two constructions become very close in function (semantics and pragmatics), one of them is likely to be eliminated from the language (see also Apresjan 1974, 2000; Kustova 2004; Paducheva 2004). This phenomenon has been convincingly demonstrated with respect to the loss of case morphology in Germanic languages by Barðdal (2009b). It is usually the low type frequency construction that is blocked. Given that the IoC is less frequently used to express comparison and is more specialised in its meaning than the *kak*-construction, we might expect the former to be eliminated. Thus, the following question arises: Why do we still use the instrumental case to express comparison, if the more frequent and more evenly distributed similative construction may take it over?

4.2.2. *Prototypical core: quasi-comparison*. Since the two constructions coexisted already in the 18th century and still coexist in present-day Russian, it is plausible to assume that the IoC has its own prototypical meaning that cannot be expressed by the similitive construction. The analysis of extensive corpus material strongly suggests that this is indeed the case. There is one particular meaning which seems to be the “specialty” of the IoC. Only the IoC, but not the *kak*-construction, can express similarity in shape after position verbs (e.g. *stojat* ‘stand’, *ležat* ‘lie’, *raspolagat’sja* ‘be situated’), causative locative verbs (e.g. *položít* ‘put’, *sostavit* ‘put together’) and motion verbs (e.g. *idti* ‘walk’, *letet* ‘fly’). By way of illustration, consider the following cases:

(15a) *Na stole ležat stopkoj 10 odinakovyx knig.* (V. Lukashik, E. Ivanova, 2003)
 on table lie pile-INS 10 identical books
 ‘Ten identical books are piled on the table.’

(15b) **Na stole ležat kak stopka 10 odinakovyx knig.*
 on table lie like pile 10 identical books

(16a) *Složil pis'mo treugol'nikom, nadpisal: Dnepropetrovsk,*
 folded letter triangle-INS wrote.above Dnepropetrovsk
kafedral'nyj sobor. (V. Timakov, 1998)
 cathedral
 ‘He folded the letter as a triangle, addressed it to the Dnepropetrovsk Cathedral.’

(16b) **Složil pis'mo kak treugol'nik, nadpisal: Dnepropetrovsk,*
 folded letter like triangle wrote.above Dnepropetrovsk
kafedral'nyj sobor.
 cathedral

(17a) *No u samogo kamnja dovol'no širokaja bolotnaja tropa rasxodilas'*
 but at very stone rather wide marsh path split
vilkoj: odna, xorošaja, plotnaja tropa šla napravo, drugaja
 fork-INS one good firm path went right another
slaben'kaja, – prjamo. (M.M. Prishvin, 1945)
 weak straight

‘But by the stone itself a rather wide marsh path forked: a good firm path went to the right, the other path was weak and went straight ahead.’

- (17b) **No u samoga kamnja dovol'no širokaja bolotnaja tropa rasxodilas'*
 but at very stone rather wide marsh path split
kak vilka: odna, xorošaja, plotnaja tropa šla napravo, drugaja
 like fork one good firm path went right another
slaben'kaja, – prjamo.
 weak straight

- (18a) *My sročno sobrali vsex sotrudnic apparata CK, vsex*
 we urgently gathered all employees apparat Central Committee all
rabotnic – bol'sinstvo azerbajdžanki, no byli i russkie, – i oni
 workers majority Azerbaijanis but were and Russians and they
vyšli cep'ju, vzjavšis' za ruki, i xorom
 went.out chain-INS having.gabbed behind hands and in.chorus
prokričali "Net!" (V. Morozov, 2004)
 cried no

We urgently gathered all female members of the Central Committee and all female workers most of whom were Azerbaijanis, but there were also a few Russians. They formed a chain, went out, joined their hands and all together cried “No!”

- (18b) **My sročno sobrali vsex sotrudnic apparata CK, vsex*
 we urgently gathered all employees apparat Central Committee all
rabotnic – bol'sinstvo azerbajdžanki, no byli i russkie, – i oni
 workers majority Azerbaijanis but were and Russians and they
vyšli kak cep', vzjavšis' za ruki, i xorom
 went.out like chain having.gabbed behind hands and in.chorus
prokričali "Net!"
 cried no

The infelicity of (b)-sentences shows that the instrumental case in (a)-sentences does not really denote comparison. Rather, the instrumental forms in (15a)–(18a) describe the ob-

jects in terms of shape. Similitive constructions can also characterize their referents, but only through comparison of two situations. Consider, for instance, (19):

- (19) *Ivan pojet kak ego otec.*
Ivan sings like his father
'Ivan sings like his father.'

In this example, two situations are compared: <Ivan sings> and <his father sings>. The similitive construction suggests that the two situations are alike: they both sing well or they both sing badly. More complex similitives can compare a referential situation with a non-referential standard of comparison as in (20):

- (20) *Ėta ŝuba grejet kak peĉka.*
this fur.coat keeps.warm like stove
'This fur-coat keeps me warm like a stove.'

Two situations are evoked by the similitive construction in (20) – a referential situation <this fur-coat keeps me warm> and a non-referential situation <a stove can keep one warm>. Since any stove can keep one warm, and since this fur-coat is like a stove in this respect, the fur-coat can keep me warm. Thus, warmth as a property of the fur-coat is established by comparing two situations.

Now notice that the IoC examples in (15a)–(18a) are very different from the similitive construction in (20). Unlike in similitives, there is only one situation involved, and this situation is further specified by means of the instrumental case. Obviously, no comparison takes place in (15a)–(18a). It is not the case that (15a) compares <books are on the table> with <piles are on the table>. Books and piles, in fact, become closely integrated within this single scene: books positioned one on top of the other *do* constitute a pile. Similarly, if we fold a piece of paper as a triangle (example 16), it *does* as a matter of fact become a triangle. In the same vein, a path that splits is, strictly speaking, not a single path, but a fork (example 17) and a set of connected people has the shape of a chain (example 18). These examples show that the cognitive distance between the trajector and the landmark in the IoC construction is much smaller than in the case of the *kak*-comparative, since the described objects (e.g. books, letters) are cognitively contingent (Kibrik et al. 2006) with their shapes. For one, shape does not exist without an object.

Since the prototypical core of the IoC construction involves no comparison, the whole construction should rather be called *quasi-comparative*. The quasi-comparative instrumental construction is syntactically and semantically similar to the *instrumental of additional characterization* illustrated in (21) (Wierzbicka 1980, cf. Bogusławski and Karolak 1970), whose semantics can be described against the background of the instrumental of main predication (example 22).

(21) *Ivan rabotal šaxterom.*

Ivan worked miner-INS

‘Ivan was working as a miner.’

(22) *Ivan byl šaxterom.*

Ivan was miner-INS

‘Ivan was a miner’

The instrumental of main predication, as in (22), is used to describe temporary situations that are presumably no longer applicable to the subject (Wade 1992: 101-103). Therefore, it is impossible to use this construction in the present tense with the omitted link verb. The instrumental of main predication cannot express full identity between the referent of the subject and the referent of the instrumental noun, because an instrumental predicative is only applicable to the past dimension of the subject’s existence.¹ This idea is captured by the following metalinguistic definition of (22):

‘I say this because I want you to be able to imagine

X-at-that-time

not because I want you to think of X as a Y’ (Wierzbicka 1980: 120)

The instrumental of additional characterization in (21) involves an even bigger cognitive distance than (22), because (21) “describes the way Ivan lives rather than Ivan as a person” (Wierzbicka 1980: 121). In this sense, Wierzbicka maintains, the instrumental of additional characterization occupies an intermediate position between a predicative and a manner adverbial. Just as in the IoC cases in (15a)–(18a), the instrumental of additional characteri-

¹ For full identity, the nominative predicative must be used, as in *Ivan – šaxter* ‘Ivan is a miner’.

zation denotes neither comparison, nor full identity. Rather, both constructions are used to provide an additional description of the subject.

At first sight, the shape-describing IoCs in (15a)–(18a) seem very different from other types of IoCs. For example, the IoC constructions in (8a)–(11a) apparently involve two situations and compare a referential situation with a non-referential standard. These situations can also be described by means of a similitive construction as shown in (8b)–(11b). However, taking the prototypical core of the IoC construction into account, we may further hypothesize that the IoC cases beyond the domain of shape are, in fact, also quasi-comparative in the sense that they profile a much tighter cognitive contingency between the comparee and the standard than in the case of the prototypical similitive construction. In Section 4.3.1, we will demonstrate that this is indeed the case.

4.2.3. Why shape? At this point, we may ask ourselves what makes shape so suitable for the semantic prototype of the quasi-comparative instrumental construction. The answer might be sought in the domain of categorization. Shape is one of the most important visual cues to object categorization. Friedrich (1970), for instance, argues that shape is a semantic primitive, which is amply used by world languages to categorize and grammatically encode objects, but also actions and locations. To mention just one example, Tarascan grammar makes use of three shape-based patterns – numeral classifiers, classificatory verbs and suffixes of locatives (see also Aikhenvald 2004; Heine 1982; Serzisko 1982). Relatedly, a number of studies have shown that geometric properties of common nouns play a crucial role in the semantics of prepositions (Brugman 1981; Herskovits 1986; Lakoff 1987: 416–461; Plungian and Rakhilina 2000; Talmy 2000; Vandeloise 1994).

Landau et al. (1988) have shown that both adults and children use similarity in shape much more often than similarity in size or texture to extend nouns to new objects. In a similar fashion, Bornstein (1985) suggests that shape has more functional significance than colour in the categorization process, for it is mostly on the basis of shape that objects of different classes can be identified as such. For this reason, Bornstein (1985) maintains, children learn to use shape adjectives correctly before they fully master colour terms.

Since shape is a major visual cue to categorization, the role of the standard of comparison in the IoC constructions may be compared to that of numeral classifiers. The noun in the instrumental case is a kind of quasi-grammatical means of object (sub)categorization. This observation has two implications for our analysis. First, the comparee and the standard of comparison in the IoC constructions are to a greater extent cognitively contingent

than the elements of the similitive *kak*-construction. Second, we may hypothesize that the similitive construction cannot be employed in cases which are reduced to purely quasi-grammatical (shape-based) similarity and therefore requires diversification of parameters. We will take this issue up in Section 4.3.1.

4.2.4. The proximity principle. Both cognitive linguistics and semiotics assume that language is largely iconic (Haiman 1980). Iconicity is defined as a conceived similarity between the form of a linguistic sign and its meaning. One of the manifestations of iconicity is the so-called *proximity principle*, which posits that conceptual distance is related to formal distance. Thus, if two conceptual entities are more related than others, their linguistic labels are likely to be placed closer to each other.

Now compare the constructions under analysis in terms of linguistic distance. In the *kak*-construction, the linguistic signs for the compared elements are separated by the conjunction *kak*; the two elements are juxtaposed without grammatical dependence. In contrast, the elements of the IoC construction are related by grammatical government, which is a much tighter formal relation. Smaller linguistic distance between the constituents of the IoC construction evidences smaller cognitive distance between the conceptual entities compared by means of this construction, which can be taken as evidence of cognitive contingency of the IoC-participants.

4.3. Inheritance hierarchies in the instrumental network

One of the major tenets of construction grammar is that language involves various degrees of generalization and that constructions occupy a specific position in a hierarchical construction network. In Goldberg's (2006: 13–14) words: "Broad generalizations are captured by constructions that are inherited by many other constructions; subregularities are captured by positing constructions that are at various midpoints of the hierarchical network. Exceptional patterns are captured by low-level constructions." (see also Kay and Fillmore 1999; Langacker 1987). Taking this assumption as a starting point, we make two predictions. First, since similarity in shape constitutes the prototypical core of the IoC construction, various non-prototypical instances of the IoC may inherit some essential properties of the prototype. Second, since the IoC construction itself is a member of a larger family of instrumental constructions, some of its basic properties may be inherited from the instrumental prototype and/or other kinds of instrumental constructions. These two predictions will be discussed in turn.

4.3.1. *Internal relations in the IoC family.* In the previous sections we saw that similarity in shape (in its pure form) constitutes the prototypical core of the IoC construction. However, the IoC can also describe similarity qua manner of motion (example 23) and produced sound (example 24). Further, the IoC construction can be used after visual predicates to denote similarity in the manner of looking (example 25) or in overall outlook (example 26).

(23) *Nikto iz nix ne letel kamnem – vse opuskalis’ zamedlenno.*

none from them NEG flew stone-INS all went.down slowly

(L. Ulitskaya, 2000)

‘None of them dropped like a stone; they all got down slowly.’

(24) *Ja tri dnja revela belugoj, neskol’ko mesjacev na mužikov smotret’*

I three days cried beluga-INS several months on men look

ne mogla, a sejčas dumaju SLAVA BOGU.

NEG could CONJ now think glory god

(Web-forum *Ženščina + mužčina*, 2004)

‘I was bellowing for three days, could not look at men for several months, and I now I think – Thank God’

(25) *Spiros sidel razvaljas’, kovyrjal v zubax, smotrel barinom.* (D. Karalis, 2001)

Spiros sat sprawling picked in teeth looked master-INS

‘Spiros was sitting sprawled, picking his teeth and looking on.’

(26) *Muščina v kostjume smotritsja Apollonom, daže esli emu ot prirody*

man in suit looks Apollo-INS even if him from nature

dostas’ jajceobraznaja figura. (L. Stotskaya, 2004)

received egg.shaped figure

‘A man in suit looks like Apollo even if he has an egg-shaped body.’

It is plausible to assume that the less prototypical uses exemplified above inherit some of the essential characteristics of the prototypical, shaped-related IoC. The analysis of corpus examples suggests that there are at least three such properties.

First, all shape-related instances of the IoC construction are intrinsically simple, i.e. they describe objects in terms of shape and nothing more than that. We will refer to this property as *monotonicity* of the IoC construction. The *kak*-construction, in contrast, is quite diverse and can denote comparison along a number of dimensions. Crucially, monotonicity is relevant not only in shape-based instances of the IoC construction, but also in less prototypical cases. Also beyond the domain of shape, the semantics of IoCs is limited to only one parameter, such as spatial configuration, manner of looking or motion. Compare, for instance, the IoC constructions in (27) and (28) with the *kak*-similatives in (29) and (30):

(27) *Konečno, on i teper' smotrel volkom, kosil na storonu*
 certainly he and now looked wolf-INS looked.asquint on side
i kak budtokogo-to s'jest' sobiralsja. (F.M. Dostoyevsky, 1846)
 and as if someone.PCL eat gathered
 'Of course, now he was also looking daggers out of the corner of his eyes and it seemed like he was going to eat someone up.'

(28) *V kameru on vseгда smotrel volkom, govoril korotko i zlo, no*
 in camera he always looked wolf-INS spoke briefly and angrily but
kak-to tak, čto jemu xotelos' verit', zagljadyvat' v glaza i
 somehow.PCL so that him wanted believe look.into in eyes and
deržat'sja rajdom. (T. Ustinova, 2003)
 keep.oneself near
 'He always looked daggers in the camera, spoke briefly and angrily, but in a way that you wanted to believe him, look into his eyes, stay near him.'

(29) *No jemu ne vezlo v svatovstve; delo v tom, čto Kuz'ma*
 but him NEG had.luck in marriage.proposals affair in that what Kuzma
byl fenomenal'no bezobrazen: on byl sutulyj, neuključij, imel ryžije
 was phenomenally ugly he was round.shouldered awkward had red
volosy, grubyj golos, smotrel, kak volk, ispodlob'ja, a ego
 hair hoarse voice looked like wolf from.under.forehead CONJ his
gromadnyj, dlinnyj nos i širokij, ljagušaćij rot s tolstymi gubami
 huge long nose and wide frog.like mouth with thick lips
i krivymi želtymi klykami vnušali nevol'nyj strax i otvraščenie.

and crooked yellow canines filled involuntary fear and disgust
(S.G. Petrov, 1900)

‘But he was not lucky in marriage proposals. The thing is that Kuzma was extremely ugly. He was round-shouldered, awkward, red-haired, he had a hoarse voice and looked from under the brows. And his huge, long nose and his wide frog-like mouth with crooked yellow canines involuntarily filled you with fear and disgust.’

- (30) *Zdes 'vse čužoje, vse vyloženo kamnjami, net ni odnoj travki. Steny smotrjat, kak volki na jagnenka.* (E.L. Schwarz, 1934)
here everything strange everything paved stones no NEG one
grass walls look like wolves on lamb

‘Everything is strange here, everything is paved with stones, not a blade of grass. The walls look like wolves at a lamb.’

Since the IoCs are confined to only one parameter, they do not have to be further specified by adjuncts. The IoC constructions in (27) and (28) are unambiguously associated with one particular meaning – a frowning manner of looking. Since the simulative *kak*-construction is semantically broader than the IoC, one specific aspect of looking as a wolf must be explicitly highlighted for comparison – looking from under the brows in (29) and looking terrifyingly as at a victim in (30). The same difference holds for the IoC construction in (31) and its *kak* counterparts in (32) and (33):

- (31) *Rb7. Pridoditsja lad'je metat'sja zajcem.* (S. Shipov, 2004)

Rb7. has.to rook dash hare-INS

‘Rb7. The rook has to dash like a hare.’

- (32) *Ljudi, zaxvačennyje poxot'ju, mečutsja, kak zajac v zapadne.*

people captured lust dash like hare in snare

(L.N. Tolstoy, 1910)

‘People captured by lust dash like a hare in a snare.’

- (33) *I kuda ja ni mečus', kak zajac na ugonkax ...vse to že,*
and where I NEG dash like hare on hunting all that PCL
to že! (I.S. Turgenev, 1878–1882)

that PCL

‘And wherever I run like a hare chased after, it’s all the same, it’s all the same.’

As evidenced by the adjuncts *v zapadne* ‘in a snare’ and *na ugonkax* ‘chased after’ the simulative construction requires parameter precisification due its diversity. The monotonous IoC, on the contrary, maps into a single parameter (a visual image of a dashing hare) and does not ask for further precisification.

A second property of the IoC outside the domain of shape that might be inherited from the prototypical IoC construction is cognitive contingency of the comparee and the standard of comparison. Earlier in this paper, we saw that the cognitive distance between the trajector and the landmark in the shape-related IoC construction is much smaller than in the simulative *kak*-construction, because shape and its possessor are cognitively contingent upon each other. It is noteworthy that this property of the IoC is also relevant in cases which do not describe shape. Compare examples (34) and (35):

(34) *Mnogije iz mužčin zastavili nas smejat'sja. Inoj voobražajet sebja puškoju*
many from men made us laugh some imagines self canon
i besprestanno palit rtom svoim; drugoj revet medvedem i xodit
and incessantly fires mouth own other roars bear-INS and walks
na četveren'kax. (N.M. Karamzin, 1793)
on on.all.fours

‘Many of the men made us laugh. One thought he was a canon and was constantly firing with his mouth. Another one was roaring like a bear and walking on all fours.’

(35) *Čego reveš kak medved'? Ubegaj otsjudova podal'se.* (Ju. Mamleev, 1997)
why roar like bear run.away from.here farther
‘Why are you roaring like a bear? Get away!’

The psychiatric patient in (34) thinks he is a bear and therefore produces bear-like sounds, which significantly reduces the cognitive distance between the trajector (patient) and the

landmark (bear). In contrast, (35) simply compares two sounds – that of a bear and that of a person.²

Third, an important property of the IoCs in the domain of shape is the *visualness* of the described parameter; both the comparee and the standard in the IoC are directly observable by the human eye. Compare examples (36) and (37):

(36) *Stixija razygralas' protiv včerašnego, volny razbivalis' o granitnyje*
element played against yesterday's waves broke about granite
naberežnyje, vstavaja stenoj bryzg. (A. Bitov, 1980–1990).
quays rising wall-INS splashes
'The storm broke as against yesterday. The waves were breaking against the granite
quays and rising in a wall of splashes.'

(37) *Vspomni Kavkaz. Xreby stojat, kak steny.*
recall Caucasus mountain.ranges stand like walls
(K. Serafomov, 1978–1996)
'Recall Caucasus. The mountain ranges stand like walls.'

The conceptualizer of (36) sees the storming waves as a wall of splashes, whereas the mountain range in (37) is construed as a mountain range that only resembles a wall. It is important to note that there is no objective ontological difference between cases such as (36) and (37). It is not the case that waves are more similar to walls than mountains are. It is a matter of dynamic construal (Langacker 1987; Verhagen 2007) in the naïve worldview (Apresjan 1995, 2006; Zalizniak 2006) of a human conceptualizer (Kustova 2004; Paducheva 1996, 2000). The conceptualizer sees the configuration of waves in (36) as a shape that forms an insurmountable obstacle; this interpretation is exclusively visual. In contrast, the conceptualizer in (37) focuses on internal properties of walls such as firmness and stability.

Further, we claim that the IoCs outside the domain of shape also tend to construe perceptually observable situations, simple events directly accessible to the human eye: e.g.

² It should be mentioned, however, that example (34) is marginally acceptable in present-day Russian, which is an indication of the ongoing semantic change. The historical development of the IoC construction, though interesting and worth pursuing, is beyond the scope of this paper. We will leave this point for future investigation.

bit' ključom 'well out', *vzletet' pticej* 'take wing', *gljadet' sokolom* 'look like a falcon', *sijat' zolotom* 'shine like gold'. Observability determines the choice of predicates which can be used in the IoC construction. Position verbs (e.g. *stojat'* 'stand', *sidet'* 'sit', *ležat'* 'lie', *raspolagat'sja* 'be situated'), causative locative verbs (e.g. *položit'* 'put', *sostavit'* 'put together', *svernut'* 'roll up', *složit'* 'lay') and motion verbs (e.g. *xodit'* 'walk', *letet'* 'fly', *polzti* 'crawl', *izvivat'sja* 'coil', *prygat'* 'jump') are acceptable in this construction due to the intrinsic observability of the situation construed by them. Observability also motivates the use of numerous visual predicates in the IoC (e.g. *smotret'* 'look, watch', *vygljadet'* 'look', *kazat'sja* 'seem', *prikidyvat'sja* 'pretend').

A critical reader might object by indicating that events denoted by auditory predicates (e.g. *vyt' volkom* 'howl like a wolf', *pet' solov'jem* 'sing like a nightingale') are not visually observable. It should, however, be taken into account that auditory events are robustly related to vision across human languages (Geeraerts 1988; Ullmann 1972; Viberg 1984; Williams 1976). For example, in languages such as Walbiri (West Australia), Djaru (West Australia) and Lesghian (East Caucasus) the word for *hear* is derived from the verb *see*. It is therefore not surprising that the IoC has also been extended to the auditory domain.³

The observability criterion explains why we cannot use the IoC construction in cases like **grejet pečkoj* (gives.out.warmth stove-INS), **tajet l'dom* (melts ice-INS), **plavajet ryboj* (swims fish-INS), **utonul toporom* (drowned axe-INS) – all these situations are not directly observable. Expressions such as **begal ugoreloj koškoj* (ran mad-INS cat-INS) and **drožal zajcem* (trembled hare-INS) are unacceptable because they depict internal states and traits – disorderliness and cowardice, respectively. All unobservable cases are too complex for the IoC and are therefore taken over by the *kak*-construction: *grejet kak pečka* 'keeps warm like a stove', *tajet kak led* 'melts like ice', *plavajet kak ryba* 'swims like fish', *utonul kak topor* 'sank like an axe', *begajet kak ugorelaja koška* 'runs like a mad cat', *drožit kak zajac* 'trembles like a hare'.

³ Interestingly enough, the 18th century corpus contains only one instance of the IoC after a sound verb (*revet' medvedem* 'roar like a bear'). The rest of the occurrences of the construction describe visually perceivable events (e.g. *lit' vedrom* 'bucket, rain cats and dogs', *katit'sja gradom* 'roll down', *polzat' čerepaxoj* 'crawl like a turtle', *nos kljapom* 'gag-shaped nose'). In early 19th century, we observe a significant extension of the IoC construction into the domain of sound (e.g. *vyt' volkom* 'howl like a wolf', *kričat' kukuškoj* 'cry like a cuckoo', *vorkovat' golubkom* 'coo like a pigeon'). However, this outcome should be taken as suggestive only, because the 18th century corpus contains about 2 million words, whereas the corpus of 19th century texts counts about 25 million words.

Compare in this respect also the following pair: *gljadet' Napoleonom* (look Napoleon-INS) vs. *vojevat' kak Napoleon* (fight like Napoleon), but **vojevat' Napoleonom* (fight Napoleon-INS). Only the observable situation – external properties of a prototypical winner (e.g. barrel-chested, eagle eye) – can be described by means of the IoC. Fighting as Napoleon, in contrast, involves an array of internal properties that cannot be captured by the perceptually “simple” construction with the instrumental case.

The observability criterion is crucial not only to the selection of predicates participating in the IoC construction, it also plays an important part in determining which nouns are acceptable and/or frequent in the IoCs. More specifically, these nouns have to denote standards of comparison with an established visual image within the Russian worldview. The more established a visual image is, the more frequently the noun will be used in the IoC and the more idiomatic the specific construction will be.

For example, the commonality of the expression *nos kartoškoj* ‘bulbous nose’ is motivated by the fact potato has been a vital product in Russia for centuries.⁴ In contrast, the visual image of a water-melon or a banana is much less prominent in the Russian culture. This explains why the RNC contains seventeen occurrences of the noun *kartoška* ‘potato’ in the IoC construction (all in combination with *nos*) and only one instance of *arbuz* ‘water-melon’ (in *život arbuzom* ‘melon-shaped belly’). Likewise, the nouns *banan* ‘banana’ and *jabloko* ‘apple’ are not used in the IoC construction at all despite the fact that they both have a very distinct shape.

In the same vein, the noun *kalačik* is remarkably frequent in the IoC construction (e.g. *svernut'sja kalačikom* ‘roll up like a kalatch’, *spat' kalačikom* ‘sleep in kalatch-shape’, *leč' kalačikom* ‘lie in kalatch-shape’, *podžat' nogi kalačikom* ‘sit with one’s legs tucked up’). In 269 out of 381 (70%) occurrences in the RNC, this noun is used to denote a standard in the IoC. A *kalatch* – a kind of fancy loaf – is a salient visual image in the Russian culture, a lot more salient than, say, a croissant. Therefore, there are no instances of the noun *kruassan* as part of the IoC construction in the RNC.

Frequent IoC phrases, based on culturally significant visual images, gradually become increasingly idiomatic and acquire additional meanings. For instance, the IoC *grud' kole-*

⁴ It is interesting to mention that visual images associated with particular standards of comparison are culturally-specific. For instance, the Russian IoC *nos kartoškoj* denotes a bulbous (fat and round) nose, whereas the English noun phrase *potato nose* and the corresponding Dutch compound *aardappelneus* are used to refer only to rhinophymatic noses.

som (lit. chest wheel-INS) ‘with chest well out’ currently denotes not only a particular shape, but also a show of bravery, whereas *gubki bantikom* (lit. lips bow-DIM.INS) ‘Cupid’s bow’ evokes the image of a nose-in-the-air girl.

The inherent observability of the IoC has several theoretical implications. To begin with, it shows that neither a verb-centric nor a purely noun-centric hypothesis can adequately account for the combinatorial patterns within the IoC construction. The semantics of the IoCs is not fully predictable by the verb, nor can it be fully predicted by the semantics of the noun. Rather, the construction itself has a meaning, observability being an important part of it. And this construction-specific meaning imposes restrictions on verbs and nouns that may participate in this IoC. As shown earlier in this section, only specific types of predicates can be used in the IoC construction; and only nouns denoting culturally significant standards of comparison are completely acceptable in the IoC. Relatedly, as shown by Desjatova et al. (2008), there are also low-level semantic restrictions on the types of nouns which can be employed to denote a comparee. For example, shape IoCs frequently describe human and animal body parts (e.g. *ruki* ‘hands, arms’, *grad* ‘chest’, *nogi* ‘feet, legs’, *golova* ‘head’; *xvost* ‘tail’, *xobot* ‘trunk’, *kljuv* ‘beak’), and (more rarely) names of clothing (e.g. *jubka* ‘skirt’, *plat’je* ‘dress’, *rubaxa* ‘shirt’), as well as paths (e.g. *tropa* ‘path’, *reka* ‘river’, *doroga* ‘road’).

The principle of observability also justifies the frequently made claims about the similarity between the IoC and metaphor (e.g. Arkadjev et al. 2008: 86; Timberlake 2004: 335; Zalizniak 1996: 173), since as demonstrated by Arutjunova (1983: 7, 1990: 28) observability is an inherent property of metaphor.

Finally, the idea of observability is related to the primacy of shape in the conceptual sphere of the IoC. As noticed in Tribushinina (2005), shape predicates are abundantly used in genres where visualization of the described situation is of paramount importance. For instance, popular-scientific texts that are meant to make very complex scientific matter accessible (more visible as it were) to the general public contain a large number of adjectives of the type *heart-shaped*. Notice that these adjectives, just as the IoCs, compare two objects in terms of shape in order to visualize a complex situation. Recall also that shape is one of the crucial visual cues to categorization (see Section 4.2.3). We may therefore conclude that descriptions of shape constitute the semantic core of the IoC due to being inherently observable.

4.3.2. *The IoC in the instrumental family.* The IoC construction is but one type of instrumental constructions and not the prototypical one. As shown in Janda (1993), the conduit instrumental constitutes the prototype of the instrumental family. More precisely, the prototypical meaning of the instrumental case, as the term suggests, is one of an instrument (Wierzbicka 1980: 4). Given that constructions occupy a specific position in a hierarchical network of related constructions (Kay and Fillmore 1999; Goldberg 2006), the IoC construction may be expected to inherit some of its essential properties from the prototypical instrumental construction.

The analysis of the empirical data suggests that observability is one such property. Observability is intrinsic to the instrumental of instrument (e.g. *rubit' toporom* 'cut with an axe'), since using an instrument is an essentially observable situation. The observability requirement accounts for the fact that nouns in the instrumental case cannot be combined with abstract verbs. Therefore, even when the same objective situation is meant (assassination in revenge), **otomstil toporom* (avenged axe-INS) is infelicitous, whereas *ubil toporom* (killed axe-INS) is perfectly acceptable. Observability of the prototypical instrumental is inherited by various instrumental constructions including instrumentals of route, agent and comparison. All these constructions lay out the specifics of the described scene, thereby *visualizing* the object of conceptualization.

A further property of the IoC that might be inherited from other instrumental constructions is the cognitive distance between a trajector and a landmark. As mentioned in Section 4.2.2, there is a difference between nominative and instrumental constructions in terms of cognitive distance. The instrumental constructions, unlike the nominative ones, can never denote full identity. Various instrumental constructions may be claimed to occupy transitional positions on the following continuum of increasing cognitive distance: instrumental of main predication > instrumental of additional characterization > instrumental of shape > instrumental of quasi-comparison. We would like to point out that this range is a continuum without strict borderlines, which is supported by the observation that Wierzbicka's (1980: 121) example of the instrumental of additional characterization in (38) can also be seen as an example of the instrumental of quasi-comparison:

- (38) *On xodil za nej ten'ju.*
 he walked behind her shadow-INS
 'He followed her like a shadow.'

Notice that what is traditionally called the *instrumental of comparison* has been now split into two sub-constructions – the instrumental of shape (e.g. *stojat' ovalom* ‘be arranged in the oval shape’) and the quasi-comparative instrumental construction (e.g. *upast' kamnem* ‘drop like a stone’). This distinction is motivated by the finding that shape instrumentals do not really denote comparison (see Section 4.2.2); rather this construction is used to describe objects in terms of shape and is in this respect very similar to the instrumental of additional characterization. Shape and its possessor are cognitively contingent just as a person and his/her profession are (cf. examples 21 and 22). In contrast, the instrumental of quasi-comparison does involve comparison of two distinct entities. Therefore, the cognitive distance between the trajector (compare) and the landmark (standard) is in this case bigger than in the non-comparative shape instrumental. Further increase in cognitive distance between the comparee and the standard of comparison brings us to the realm of the similative *kak*-construction (see Section 4.3.1).

The distinction between purely shape-describing instrumentals and cases of quasi-comparison is further supported by the distribution of similatives in case-free languages such as English and Dutch. Critically, these languages construe cases such as *stojat' ovalom*, *složit' ruki krestom na grudi* and *letet' klinom* only non-comparatively (Eng. *be arranged in the oval shape* / **be arranged like an oval*, *cross one's arms* / **put arms like a cross on one's breast*, *fly in V-shape* / **fly like a wedge(V)*; Dut. *in de vorm van een ovaal staan* / **als een ovaal staan*, *armen kruizen* / **armen als een kruis op de borst leggen*, *in V formatie vliegen* / **als een wig(V) vliegen*). Recall that in these cases Russian does not allow the similative construction either (**stojat' kak oval*; **složit' ruki kak krest na grudi*; **letet' kak klin*). In cases like these, English and Dutch often use denominal verbs as in *cross one's arms* / *armen kruizen* or compound nouns as in *pruimmondje trekken* ‘purse one's lips’ (lit. pull a plum mouth, cf. *složit' gubki bantikom*). The fact that the IoC construction often corresponds to compound nouns and denominal verbs in Germanic languages is very instructive, since these forms iconically represent a smaller cognitive distance between the two objects compared in this manner (see Section 4.2.4).⁵ This confirms

⁵ In this connection, it is important to note that expressions such as ‘cross one's arms’ and ‘oval-shaped’ also exist in Russian (*skrestit' ruki*, *oval'nyj*). In other words, Russian has a number of quasi-synonymous constructions for expressing similarity in shape. This observation suggests an immediate direction for further research. It is important to investigate the functional differences between various shape-comparing constructions (IoC, compound adjectives, denominal verbs) in order to establish the exact correspondences between

our claim that an important difference between the IoC construction and the *kak*-comparative is the degree of cognitive contingency between a comparee and a standard of comparison.

In contrast, quasi-comparative situations such as *letet' streloj*, *poletet' kamnem vniz*, *vyt' volkom* and *sijat' zolotom* are construed as similatives in English and Dutch: Eng. *fly like an arrow*, *drop like a stone*, *howl like a wolf*, *shine like gold*; Dut. *als een pijl (uit de boog) vliegen*, *als baksteen naar beneden vallen*, *huilen als een wolf*, *als goud schijnen*. Importantly, in all these cases Russian also allows the similative *kak*-construction: *letet' kak strela*, *poletet' kak kamen' vniz*, *vyt' kak volk*, *sijat' kak zoloto*. This outcome confirms our claim that quasi-comparative instrumentals such as *letet' streloj* occupy an intermediate position between instrumentals of additional (shape) characterization and similatives. Therefore, languages which have no instrumental construction adapt such cases to similatives. Due to having both the instrumental and the similative construction, Russian is then better able to manipulate the cognitive distance between the comparee and the standard of comparison.⁶

4.4. Vantage configuration

In the foregoing sections, we have been analysing the distribution of the IoC construction vis-à-vis the *kak*-similative. The analysis has shown that these constructions are not synonymous. Rather the semantic relation between them is one of co-extension, a type of semantic relations first described by MacLaury (1995, 1997) within the framework of *vantage theory*. Co-extensive categories largely overlap, but still retain their own prototypical core. They do not have an equal status though. One of the categories is dominant; it is more frequent and has an even distribution. The other category – called *recessive vantage* – has a narrow range and a very specific prototype located towards the periphery of the co-extensive category. The dominant category usually covers a great deal of the recessive vantage.

If we apply vantage theory to the analysis of the two comparative constructions, we see that the *kak*-comparative is the dominant category applicable to a wide range of compara-

their form and function, and to be able to place these constructions in a larger network of comparative constructions.

⁶ This idea is consistent with Timberlake's claim that the instrumental manipulates two situations, it "both differentiates them and also connects them as part of a larger picture" (Timberlake 2004: 337).

tive situations. In contrast, the IoC has a very narrow range of application and a very skewed distribution: it is confined to quasi-comparative observable situations and descriptions of shape, manner of motion, looking and sound. The IoC vantage is located towards the periphery, since it is restricted to situations where the cognitive distance between a comparee and a standard of comparison is small. The dominant comparative construction and the recessive vantage significantly overlap, in the sense that the *kak*-comparative is applicable in most cases where the IoC can also be used, with the exception of the cases of pure (quasi-grammatical) shape descriptions (e.g. *svernut' treugol'nikom* 'fold in the shape of a triangle') which constitute the prototypical core of the IoC.

5. Conclusion

One of the most significant findings of this investigation is that the semantics of the IoC cannot be adequately accounted for by either a verb-centric or an entirely noun-centric approach. The preceding sections provide ample evidence that the meaning of the instrumental construction is not entirely predictable in terms of the argument structure of the predicate; nor is it completely determined by the semantics of the nominal element(s). The construction as such has its own semantics; essential properties of its content are observability, monotonicity and a small cognitive distance between the trajector and the landmark.

The data in this study also suggest that construction traditionally called *instrumental of comparison* is rather quasi-comparative in nature. The prototypical core of this construction covers descriptions of shape, where the relation between shape and its possessor is cognitively contingent, but obviously non-comparative. These cases are semantically very close to the instrumental of additional characterization. Less prototypical cases of the quasi-comparative construction describe manner of motion, sound and outlook; these cases occupy an intermediate position between the instrumental of additional characterization and the simulative *kak*-construction. Like the other instrumentals, quasi-comparatives denote a smaller cognitive distance between the trajector and the landmark. However, unlike the instrumental of additional (shape) characterization, this construction construes two distinct situations and is in this respect similar to the comparative *kak*-construction. The simulative construction is preferred in less observable and more diversified cases, as well as in the cases with a larger cognitive distance between the comparee and the standard. The instrumental construction and the *kak*-simulative were shown to constitute a co-extensive

range, with the similitive construction as a dominant vantage and the instrumental as a recessive vantage.

A major result of interest is that not only “exotic” languages, such as African, Austronesian and Mayan languages, but also a Slavic language – Russian – can grammatically encode shape. We have argued that the IoC construction is a quasi-grammatical means of object (sub)categorization. This finding suggests two immediate directions for future study. First, it would be interesting to know whether other Slavic languages can also grammatically encode shape the way Russian does. Second, many questions remain about the cross-linguistic realizations of categorization on the basis of shape. We have seen that English and Dutch also distinguish between pure similarity and additional shape characterizations and use derivational morphology to encode the latter. It will be a matter for future research to establish how other Indo-European languages encode similarity (or additional characterization) qua shape and how this typology is related to the cognitive salience of shape in the categorization process.

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