The Nganasan lexicon from a diachronic onomasiological point of view: The case of metonymy[1]

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1. Introduction

The aim of this paper is to provide a solution that has been developed to address an issue of categorization which has occurred during work on the diachronic cognitive onomasiological dictionary of Nganasan. The issue concerns the definition of the relationship between the meanings of two lexemes which have been categorized here as a type of conceptual contiguity (a metonymic relationship). One of the questions is whether this type of relationship indeed realizes a metonymic relationship (to oversimplify it: is the correct terminology used for it?), whereas the other question is along what principles and patterns this category can be differentiated further. Further differentiation is necessary because there are much more instances of conceptual contiguity than of other relationships of meaning, which makes the correct interpretation of metonymy and conceptual contiguity in the HeNg-On dictionary of utmost importance.

In this paper I present my own system, also discussing the theoretical underpinnings that are relevant to the argumentation. The topic is also relevant in view of the fact that several new works and analyses of lexical and word formation metonymy and of metonymy in generalhave been published in recent years, especially within the field of cognitive linguistics.

2. HeNg-On

HeNg-On is a diachronic cognitive onomasiological dictionary of the Nganasan language, a "historical etymological thesaurus" of sorts, with two major goals targeted in making it. The first has been to outline the lexical typological/cognitive onomasiological profile of Nganasan; defining the relationship of the meanings of various lexemes and working out the framework for these relationships is the most difficult part of this task. The second one has been to form groupings of Nganasan lexical items by origin (items created language internally, loanwords, lexical continuity, and unknown). Within the latter goal, uncovering the origin of lexemes so far categorized as unknown has also been set as an aim, especially as far as the northern Samoyedic languages are concerned.

All of this has been done on a dynamic website which makes it possible to continuously enlarge and refine the database and to carry out quick or complex searches, thereby aiding future lexicological, etymological and other linguistic research on these languages. The dynamic website can be found at www.hengon.arts.u-szeged.hu and can be used without registration. All relevant important information regarding the project (publications, links, user instructions etc.) has been made available here. Once the Lexicographical Program is created, the database can be extended in several ways, by increasing the number of languages, lexemes, concepts, semantic domains, analytical parts etc. The present paper relies on data that have been uploaded to the website by March 2015.

3. The Nganasan people and language

Nganasan belongs to the Northern branch of the Samoyedic group of Uralic languages. It is the northernmost language of Siberia and probably of the world. Officially classified as a moribund language, Nganasan is very close to extinction with slightly more than a hundred adult speakers. According to the 2010 Russian Census, the number of the ethnically Nganasan population was 839, with 125 speakers of the language.

The Nganasans live at the Taymyr peninsula in the Russian Federation. They live in a semi-nomadic way, mostly in two ethnically mixed settlements, Ust-Avam and Volochanka. The speakers of Nganasan are all bilingual in Russian, and in the past decades the process of language shift and language loss have accelerated to such an extent that at present they seem irreversible (for more on this, see Ziker 2002, and Wagner-Nagy and Szeverényi 2011). Nganasan has two main dialects, the Avam

and the Vadeyev dialects: the former is spoken in the western part of the Taymyr Peninsula, the latter in the eastern part. The differences between the two dialects are primarily in the phonology and lexicon – although, admittedly, studies of dialectal differences in Nganasan are rather limited. And because linguistic fieldwork has been done mostly in the western part of the language area, the Avam dialect is much better documented than the Vadeyev dialect is.

Nganasan is (still) regarded as an underdocumented language. The first relevant linguistic materials were collected by the Finnish scholar Matthias Alexander Castrén (1813–1852) in the 1840s. He produced a work which was not only a dictionary but an outline of a descriptive grammar, primarily of the morphology of Nganasan. Castrén's is a very valuable and precise collection of language materials which had no match in the next one hundred years. Soviet scholars published some materials on Nganasan after World War II, and some texts were published in Hungary by Mikola (1970) – but all of these were primarily texts in the language, mainly folkloric in nature. As far as the grammatical description of the language is concerned, Tereshchenko's 1979 grammar of Nganasan provided the next considerable step, followed by E. A. Helimski's work, which provided an increasing amount of carefully collected materials on the language beginning with the 1980s. But the main emphasis in this work was still on collecting texts, with language data collected via questionnaires lagging behind, although increasing in amount in absolute terms over the years. Because of this, descriptions of Nganasan grammar were for a long time based solely on collected texts. The work describing Nganasan received renewed impetus in the 1990s when the main morphophonological rules of the language were identified (e.g. Helimski 1994, Wagner-Nagy 2002). Two comprehensive chrestomathies (a collection of texts, grammar, and dictionary) have been published in Hungarian and German (Wagner-Nagy 2002 and Katzschmann 2008, respectively).

4. The Nganasan word formation

In order to have a clear view of the relationships between meaning and form in Nganasan, it is important to say a few words about word formation in this language.

Nganasan is an agglutinative language, with inflections being suffixes exclusively. The most widely used method of Nganasan word formation is derivation: the number of both nominal and verbal derivational suffixes is relatively large (cf., for instance, Wagner-Nagy 2002). A less frequent but still important method is semantic derivation (Zalizniak 2008) or conversion, as it is traditionally

called, that is, zero derivation, or derivation without the use of overt formal morphological markers. Compounding is not typical in the language at all, only a handful of phrases are "suspected" to be compounds in Nganasan lexicography (e.g. *tuj* 'fire' + *ŋənduj* 'boat' > *tuu* [Gen] *ŋənduj* 'steam boat'). There are numerous loanwords in Nganasan, with the majority of recent lexical borrowings being, not surprisingly, of Russian origin. It has to be noted that almost the entire Nganasan speech community is characterized by bi- and multilingualism, and because of the rapid language shift that the community is undergoing it is often difficult to tell whether a given word is a Russian loanword or a codeswitch. For this very reason, words of Russian origin are currently not included in the dictionary. Russian loanwords in Nganasan have not been investigated in a comprehensive way yet, although several studies (by Futaky, Anikin, and Helimski) examined established loans. Other methods of word formation (e.g. reduplication or serial verbs etc.) are not used in Nganasan.

5. Diachronic cognitive onomasiology (DCO)

The theoretical framework of the dictionary is provided by DCO, as I have discussed in previous publications in detail (Szeverényi 2012, 2014). The most important points of this framework as are follows.

The dictionary classifies and systematizes relationships between lexemes, from the point of view of both formal relationships between two lexemes and the semantic relationship between their meanings:


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lexeme 1 (L1)                    concept 1 (C1)
lexeme 2 (L2)                    concept 2 (C2)


(L1 = source form, L2 = target form,
C1 = source concept, C2 = target concept)
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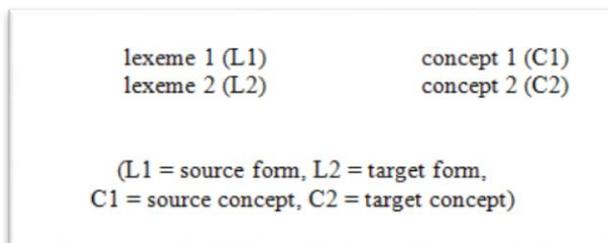
All of this requires basic (etymological, lexicological etc.) research. It is a crucial question how conceptualization at the onomasiological level can be modeled.

The theoretical framework used here is provided primarily by Štekauer's onomasiological theory (1998, 2005). In his approach "the general linguistic background is that of the functional-structural approach of the Prague School of Linguistics. Therefore, the form-meaning unity, i.e., the bilateral nature of

morphemes is regarded as the fundamental principle", furthermore, word-formation occurs as an independent component in the following way. Štekauer presents a model where the word-finding process is divided into the following levels (see also Grzega 2008):

(1) the conceptual level, where the concept to be named is analyzed and conceptually categorized in the most general way – i.e. "SUBSTANCE, ACTION (with internal subdivision into ACTION PROPER, PROCESS, and STATE), QUALITY, and CONCOMITANT CIRCUMSTANCE (for example, that of Place, Time, Manner, etc.)";

(2) the semantic level, where the semantic markers or semantic components are structured;

(3) the onomasiological level, where one of the semantic components is selected as the onomasiological basis (representing a class like agent, object, instrument etc.) and another as the "onomasiological mark" of this basis (the mark can further be divided into a determining constituent — sometimes distinguishing between a specifying and a specified element — and a determined constituent) (= naming in a more abstract sense);

(4) the 'onomatological' level (with the Morpheme-to-Seme-Assignment Principle, where the concrete morphemes are selected (= naming in a more concrete sense); and

(5) the phonological level, where the forms are actually combined, respecting morphological and suprasegmental rules.

I concentrate on the first and fourth levels, that is, the conceptual and the onomatological. The second and third levels are difficult to use in the historical semantic and diachronic onomasiological framework, since our sources and linguistic competence do not make it possible to use them, allowing only for a speculative analysis. Furthermore, as has been pointed out by Grzega, differentiating between the first and second levels is problematic: "We may ask, however, on what cognitive or psycholinguistic results this model was constructed. The distinction between the conceptual and the semantic level is not corroborated by psycholinguistic analyses. These rather tells us that we should depart from what we could call a 'perceptual level', where both the more general, 'global' features and the more specific, 'local' features of a concept are processed at the same time" (Grzega 2008: 77).

This also foreshadows that in in the semantic analysis presented here only a general, abstract system can be made used.

5.1. Semantic innovations in DCO

There are different alternative ways of analyzing cognitive relationships between meanings and different depths to which such an analysis can extend. On the one hand, it is useful to employ terms used in lexicography internationally, while on the other it is important to take into account the characteristics of a given language or group of languages, with special attention to those languages that will be included in the database later. In the present project work by colleagues from Tübingen have been used – it is important to state that different lists of terms were used by them in several publications (e.g. Blank 2001, Gévaudan and Weibel 2004, Gévaudan 2007, Koch and Marzo 2007, Koch 2008). The basic system is as follows:

semantic relation	semantic process
identity	identity (verbum proprium)
taxonomic inclusion	specification
	generalization
contiguity	metonymy
similarity	metaphor

Table 1. Semantic relations and processes (Gévaudan 2007: 110)[2]

The same process/relationship can be categorized under different headings, for instance:

(1)   PS *tuj* 'fire' Noun (SW 166) > Ng. *tusajkuə* 'black' Adj (KMZ 181)

> 1. lexical continuity: PS 'fire' > Ng. 'fire' (conceptual identity)
> 2. compounding: 'fire' + 'sand' > 'ashes, coal' (conceptualcontiguity: kind of)
> 3. suffixation: 'ashes, coal' > 'black' (conceptual similarity: color of)

At the same time, only the most notable characteristic is captured, for instance:

(2)   *binɨ* 'rope, cord' Noun > *binɨ-dʼi* (Infinitive) 'to domesticate (a reindeer), to teach a reindeer to wear a harness' Verb (KMZ26)

> 1. derivation: denominal verbal (conceptual contiguity: Object for Action)

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[2] Some researchers treat taxonomic relations as part of contiguity due to the fact that they typically express metonymic (part/whole) relations. I follow Gévaudan's classification in this respect.

Doing the analysis without context has several drawbacks, one of which that is very relevant in this case is that it is difficult to analyze lexemes that are clearly connected but, without the context, the nature of their connection can only be established hypothetically.

6. Metonymy in HeNg-On

6.1. On the definition of metonymy

Cognitive linguistics treats metonymy as a conceptual process and metonymic relationships as conceptual relations (for more detail, see, for instance, Bencze 2009). Metonymy is one of the most innovative and most productive method, which, compared to the metaphor, had been seen as much less "interesting" by researchers for a long time but has become the focus of a number of monographs and volumes of studies lately (e.g. Denroche 2015, Littlemore 2015).

In diachronic cognitive onomasiology the category/term of contiguity/metonymy is used (e.g. Koch 2001, 2008, Blank 2001, Gévaudan 2007 etc.). The general definition of contiguity – as cited often and in various places – is a continuous mass, or a series of things in contact or in proximity. Contiguity metonymy is identified among the imaginative capacities of cognition (Langacker 1993). Metonymy is responsible for a great proportion of the cases of regular polysemy (Cruse 2000: 211).

From the perspective of metonymy, on the one hand, "[m]etonymy is a cognitive process in which one conceptual entity, the vehicle, provides mental access to another conceptual entity, the target, within the same idealized cognitive model" (Radden and Kövecses 1999: 21).

On the other hand, "the meaning relationships considered in the traditional study in linguistics of 'relational semantics', such as 'hyponymy', 'superordinacy', 'synonymy' and 'antonymy', are necessarily metonymic, because meaning relations described by them must involve some degree of semantic overlap" (Denroche 2015: 60). Furthermore, "the relationship between the superordinate vehicle and its hyponyms, e.g. car, bus, lorry, van, is metonymic; the relationship between the synonyms little/small, over/above, expert/specialist etc. is metonymic, because synonym pairs share denotational meaning, if not connotational meaning; and the relationship between 'complementary antonyms', such as on/off, open/closed, dead/alive, 'gradable antonyms', such as big/little, fat/thin, rich/poor and 'reversive

antonyms', such as start/stop, husband/wife, borrow/lend, are metonymic, as they also share complementary features."

Koch distinguishes three degrees of metonymic effects (Koch 2004):

I. non-literal ad hoc metonymies relying on implicatures at the universal level of (cognitive) speech rules;

II. non-literal discourse-ruled metonymies relying on conventional (or generalized) implicatures at the historical level, defined by discourse rules;

III. literal (lexicalized) metonymic polysemies relying on explicatures at the historical level, defined by language rules.

DCO focuses on the third type of effects, that is, it does not rely on contextual meaning but on historically fixed changes of meaning (which, of course, does not exclude it being morphologically motivated). Gévaudan (2007: 88–95, 1999) applies the phenomenon of conceptual contiguity/metonymy within the framework of DCO, thus building primarily on the tradition of historical semantics and rhetoric. According to him, all of the examples below exhibit metonymic relationships:

a. polysemy: Ger. *Glas* 'material' / 'drinking vessel'

b. change of meaning: Lat. *testimonium* 'testimony' > Fr. *témoin* 'witness'

c. suffixation: Esp. *toro* 'bull' > *torero* 'matador, bullfighter'

With the help of "Frame" categories (cf. Fillmore 1975), Gévaudan identifies metonymic relationships – this is the context in which the two meanings are connected. For instance, to refer to the last example: the connection between the meanings of toro and torero is contiguity which belongs under the frame BULLFIGHTING. As Denroche (2015: 60–61) remarks: "Fillmore's concept of the 'frame', closely equivalent to terms favoured by other scholars, such as schema, script, scenario and cognitive model, is a theory of understanding categories which relies on metonymic processing". Denroche quotes Fillmore, according to whom a frame is a collection of interrelated concepts: "I have in mind any system of concepts related in such a way that to understand any one of them you have to understand the whole structure in which it fits"; and access to one of them allows access to the others: "when one of the things in such a structure is introduced into a text, or into a conversation, all of the others are automatically made available" (Fillmore 1982/2006: 373)."

6.2. Lexical and word-formation metonymy

So far, context free, primarily lexicographic material has been processed for the HeNg-On dictionary. From this it follows that it focuses mostly on the basic, primary meanings of lexemes and, due to a lack of a suitable corpus, it does not analyze special meanings, investigating lexicalized, literal metonymic relations. The reason for this is that, due to a lack of early sources, historical changes can only be reconstructed, and that the Nganasan linguistic data is not suitable for an analysis of linguistic creativity. However, the investigated relations include also those where the source is a reconstructed element belonging to an earlier historical layer, and, because of this, the relationship itself can only be hypothetical and reconstructed. There are 26 such relationships at present.

Defining the relationships between meanings is much more problematic than that of formal relationships. The largest group of problematic relations is that of conceptual contiguity (metonymy). Providing an exact definition is problematic, not only in terms of the present project, but also in the cognitive linguistic literature. In defining contiguity/metonymy, I have relied on Géavudan and Koch's system, also taking into account Janda (2011), Haselow (2011) and Štekauer's (2005) onomasyological theory, the common element of all of these being that, behind processes of word formation, they presuppose cognitive processes, some of them of the kind implied by derivational suffixes themselves and interpretable as Source+Target pairs of metonymic relationships. Most metonymic pairs were marked with a "metonymic pattern" label in the Comments field, which refers to basically conceptual categories. Two such examples are as follows:

(3)　*səənə* 'foolish, stupid, silly' Adj > *səənə-m-sa* (Infinitive) 'to become foolish, to become stupid, to become silly' Verb

　　word-formation:　　denominal verbalizing derivational suffix (translative)
　　semantic relation:　　conceptual contiguity (Property for Result)

(4)　*basa* 'iron, metal' > *basa* 'money'

　　word-formation:　　semantic change
　　semantic relaton:　　conceptual contiguity (Material for Object)

It is important to discuss the relationship between derivation and conceptual categories separately at the lexicological and morphological levels. We have relied on Haselow (2011) in this, who has investigated the interrelationship of suffixation

and conceptual categories from a historical aspect. His analysis is compositional, although it is clear that compositionality may be lost in processes of lexicalization. As Štekauer (2005: 212) also recognized, "word-formation deals with productive and rule-governed patterns (word-formation types and rules, and morphological types) used to generate motivated naming units in response to the specific naming needs of a particular speech community by making use of word-formation bases of bilateral naming units and affixes stored in the Lexical Component."

A heated debate has taken place recently about the issue of metonymic relationships and suffixation in the journal Cognitive Linguistics, centering on the categorization of word-formation metonymy and lexical metonymy: Janda (2011, 2014) argued that derivational affixes themselves can express metonymic relationships, as is exemplified in Table 2 (Janda 2014: 345):

no derivation	*milk* n.	lexeme	contained for container	as in *The milk tipped over*
zero derivation	*milk* v.	conversion	product for action	as in *The farmer will milk his cows*
overt derivation	*milker* n.	morphological derivation	action for agent	as in *She is good milker*

Table 2

Janda's stance can be summarized as follows: (1) the focus of most works on metonymy has been on lexical metonymy, how to describe it, and how to distinguish it from the metaphor. "Metonymy is an inferential relationship between two concepts: a source concept is overtly named and provides mental access to a target concept in a given context" (Janda 2011: 360). (2) According to him, there is no fixed boundary between lexical metonymy and word-formational metonymy since they coexist in the lexicon-grammar continuum. And finally, (3) context, whether it be a suffix or other cues, is always a factor in metonymy. The following, then, applies in word-formation (Janda 2011: 360):

the source: word that the derivation is based on
the context: the affix (for the metonymic relationship)
the target: the concept associated with the derived word

Analyzing linguistic data from Russian, Czech, and Norwegian, Janda claims that "actually there are more types of metonymy patterns in word-formation than in the lexical use of metonymy" (Janda 2011: 362).

Janda's theory has been criticized by Brdar and Brdar-Szabó (2013, 2014), whose point relevant to the present discussion is as follows: "While both the base and the suffixation is nominal, i.e. the metonymic vehicle is manifest as a noun and the putative metonymy is a noun, as the suffix is word-class maintaining, the verbal base (bake) can hardly be believed to provide simultaneous access to both the concept of 'baking' as activity and 'baker' as the participant in the activity" (Brdar and Brdar-Szabó 2013: 45).

6.3. Conceptual categories and suffixation

Reference to Janda (2011 and 2014) in the present discussion is made relevant by the fact that in Nganasan, where derivation is the most frequent process of word formation, several derivational suffixes exist that follow certain metonymic patterns – although I cannot and do not want to take a stand on whether this really presents a "context" for metonymy. In this, I side with Brdar and Brdar-Szabó, "Metonymic shifts do not arise in the course of derivation, but either operate on the end-result of word-formation" (Brdar and Brdar-Szabó 2013: 45), however, Janda's works have demonstrated that derivation contributes to the realization of a given metonymic relationship.

The term "metonymic pattern" is used here as the type of the relation between conceptual categories such as Person, Object, Action, Instrument etc. I argue that – following Janda (2011, 2014), and especially Haselow (2011) – the word formation processes determine cognitive processes as well. I have applied some basic conceptual categories to describe metonymic relations. These are general, abstract categories which are not the same as the notions of "schema" or "frame" (e.g. Fillmore 1975) but are more general:[3] Person, Object (Material, Instrument), Action (Motion, Event etc.), Characteristic/Property, Abstract (Manner, Result, Goal, Category, Possession etc.), Place.

The starting point is that the meanings of source and target forms can be categorized into conceptual categories (schemas), but the abstract categories of target forms can be consistently defined by certain productive suffixes. Suffixes

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[3] Haselow applies five conceptual categories that are assumed to compose the schema of a particular situation: Person, Object, Location, Action (event), and Abstract (Result, Goal) (Haselow 2011: 56).

indicate particular conceptual categories, e.g. teach-er, surf-er 'person who performs V': Action > Person. We can clearly see that certain productive derivational suffixes behave consistently: forms derived with them form metonymic relations with their sources, and the result of the process also falls into a certain conceptual category, such as in the following cases:

-m- translative suffix (Noun > Verb)

> *sʲiər* 'cause, reason' N > *sʲiəri-m-sɨ* (infinitive) 'to be guilty' V (KMZ154-155)
> conceptual contiguity: Object for (Change of) Property

-ə relational adjectival suffix (Noun > Adjective)

> *ńersəgə* 'enemy, foe' > *ńersəgə-ə* 'hostile' (KMZ111)
> conceptual contiguity: Person for Property

inflectional prolative suffix *-mənu* (Adjective > Adverbial)

(5)   *ərəkərə* 'beautiful' Adj > *ərəkərəmənu* 'beautifully, well' Adv (KMZ219)

> conceptual contiguity: Property for Manner pattern

Some derivational suffixes do not show such consistency. One reason is that some non-productive suffiexes are analysed as well.

(6)   *labsə* 'cradle' > *labsə-kəə* 'the youngest child in the family'

> derivation: the derivational suffix *-kəə* is a non-productive adjective forming suffix
> conceptual contiguity: Characteristic for Person

The dictionary contains the following main metonymic patterns:

Source	Goal
Action	Characteristic
	Object (e.g. Instrument)
Characteristic	Object
	Person
	Manner
	Material
	Person
	Result

	Category
Material	Action
	Object
	Property
Object	Action
	Property
	Category
	Motion
	Place
State	Action
	Possession

6.4. Metonymic relations in HeNg-On

In the analysis, relations between meanings and relations between forms are treated separately. The former define semantic relations, accompanied by the manner of the formal process.[4] Aiming to carry out an investigation of the entire basic vocabulary, this way it is possible to model what word-formation process typically accompanies what semantic process in Nganasan processes of lexicalization. This is in accord with the primary aims of DCO: we can get closer to creating the motivation profile of a language (cf. Koch 2001, Koch and Marzo 2007, Koch 2008).

At present there are 576 cases of conceptual contiguity where a Nganasan lexeme is the source. From the point of view of form, the proportions are as follows:

derivation:	481	(a total of 586)
lexical continuity:	26	(a total of 328)
conversion:	70	(a total of 125)
loan:	1	(a total of 24)

(A semantic relation is characterized by more than one morphological relation.)

The smaller proportion of the last three groups can be explained by the following:

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[4] It sometimes (admittedly very rarely) occurs that it is difficult to define which one is the original form, and which one is the target. This can happen in cases of semantic change without change in form, or in cases suspected to be formed through re-analysis (these are usually relational adjectives).

Most elements inherited from earlier historical layers have preserved their original general meanings according to the reconstructions. There are few examples in the etymological literature where forms of a daughter language appear with different, derived meaning:

(7) PS *kåptə̂- 'to castrate' V (SW60) > Ng. *kobta-ʔa* 'deer buck, castrated male deer' N (KMZ66)

> 1. lexical continuity
> (2. deverbal nomen (augmentative)
> conceptual contiguity Action for Category (Property for Type)
> conversion

(8)   Ng. *ŋənduj* 'boat' N > *ŋəntəusa* 'to ride a boat' V

> 1. zero derivation
> Instrument for Motion (Object for Action)

A considerable number of the analyzed loanwords did not undergo meaning change but were, instead, borrowed together with their original meanings (22 of the 24 examined forms).

7. Conclusion

Returning to the original question, namely, the investigated relations can be analysed as metonymy or they are something other. As we have seen, there is no general, unambiguously applicable notion of metonymy in onomasiology or in cognitive linguistics, and using the broad notion of metonymy as proposed by Janda might be the solution. Since the present analysis examines the result rather than the progression of the process, it is not of primary concern whether metonymic relations are expressed by general and frequent suffixation in Nganasan or, instead, the the meaning of the derived form (stem + suffix) is crucial. At the same time, we can also see that some suffixes consistently trigger a change of conceptual categories.

Abbreviations

Adj   adjective
Adv   adverbial
N   noun
V   verb

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