

Meaning Transfer and the Compositional Semantics of Nominalizations*

Regine Brandtner

University of Stuttgart

Deverbal nominalizations derived with *-ung* in German display different sortal readings (e.g. event, result, object) depending on the context that they occur in. However, there are cases that show conflicting evidence and hence pose problems for the compositional process. This paper provides a new explanation for the constructions in which one nominalization is understood as expressing two different readings simultaneously in order to match different semantic restrictions by modifiers or governing predicates. As these cases cannot be explained sufficiently by conventional strategies of interpreting nominalizations in context, I apply Nunberg's notion of predicate transfer to shift the context rather than the noun: It is claimed that the nominalization expresses just one reading that fits the semantic restriction of the first modifier or predicate, while the second modifier or predicate changes its meaning through meaning enrichment. This analysis allows for the preserving of compositionality and releases other theories of these special cases.

1. The Double Reading Paradox

German has various means for nominalization as exemplified in (1):

- (1) Die Straße liegt in einer stumpfen und nüchternen **Beleuchtung** ('lighting': **V + -ung**), die alles **Geheimnisvolle** ('the arcane/ mysterious': [[**Adj. + -nis**] + **-voll**] + **conversion**), jede **Absonderlichkeit** ('peculiarity': **Adj. + -keit**) der **Stimmung** ('mood/sentiment': **noun + -ung**, here: lexicalized) ausschließt.

(from: Thomas Mann: *Königliche Hoheit*)

As with nominalizations in other languages, the highly productive *-ung* nominalization in German shows different sortal readings (e.g. event, result, object) in different contexts. However, the main question of this paper concerns cases like (2) and (3), where this reference is ambiguous when two conflicting indicators appear in one and the same context. In (2) the adjective *wiederholt* 'repeated' indicates an event reading whereas the verb *belegen* 'show' indicates a result object:

* I would like to thank Klaus von Heusinger for his support in writing this paper, Hanna Weiland for her help with the collection of the data, Alice ter Meulen for helpful comments on temporal structure and Kurt Eberle, Ljudmila Geist, Uli Heid, Manuel Kountz, Edgar Onea, Antje Roßdeutscher, Florian Schäfer, Torgrim Solstad and Melanie Uth for their comments on an earlier version.

- (2) Die [wiederholten]_{EV} Messungen [belegen]_{RE}, dass keine Besserung eingetreten ist.

‘The repeated measurements show that there hasn’t been an improvement.’

We also find the reversed order of the respective sortal readings as in (3), where *vorliegend* ‘available’ indicates a result object and *durchgeführt* ‘conducted’ an event:

- (3) Nur wenn man die genaue Bezeichnung des Videosystems kennt, kann man abschließend sagen, ob die [vorliegende]_{RE} Messung [regelmäßig durchgeführt]_{EV} wurde und somit verwertbar wäre.¹

‘You can only tell whether the measurement at hand was conducted regularly (...), if you know the precise name of the video system.’

I will call such cases the double reading paradox or DRP: two indicators contradict each other in the same context so that we have a conflict between the requirements of the indicators. The question arises as to how these examples can be dealt with.

A first intuition would be that the nominalization itself shifts its meaning to meet the requirements of both indicators one by one. Obviously, this would be an implausibly complex operation and we would want to specify the reading of the nominalization once in this narrow context and not change it or leave it open. As theories about nominalizations in general cannot explain this phenomenon sufficiently, I suggest a new analysis which preserves the first indicated reading and shifts the second indicator by applying the mechanism of predicate transfer. According to this analysis, once a sortal reading is suggested by the first indicator it remains fixed. This indicator takes priority over the second one, which is then modulated or shifted to match the unique sortal reading. This alternative strategy applies to the context instead of the nominalization and therefore retains compositionality. The predicate transfer analysis will be explained in depth in section 5.

To gain a deeper understanding about the interaction between different indicators I will first take a closer look at the different kinds of sortal indicators (section 2). Some further examples in section 3 will show that the double reading paradox is a common phenomenon in discourse and can occur in different constructions. As a basis for the introduction to the notion of predicate transfer (Nunberg 1995, 2004), I will contrast several other types of sortal shifts in section 4 to test if they can account for the DRP and will then provide a specific analysis of the DRP cases as well as constraints in section 5 and 6.

¹ http://www.frag-einen-anwalt.de/Polizeivideo-bei-Geschw.%C3%BCberschreibung_f26038.html, 7.02.2008

2. Types of Sortal Indicators

As we have seen in examples (2) and (3) sortal indicators specify the actual reading of the nominalization in context, but we can further subdivide this class into the following types according to their position. I will give examples for local and structural indicators, as well as for the temporal structure of the discourse as an indicator.

2.1 Local indicators

Local indicators can appear within the DP or as a VP/ predicate to the nominalization. Event and process readings are for example indicated by:

- Time frame predicates: *beginnen/ aufhören/ weitergehen* ‘begin’/ ‘stop’/ ‘continue’
- Duration: *hat 6 Monate gedauert* ‘lasted 6 months’
- Dates: *am 7. Juli* ‘July 7th’
- Process modifying predicates: *vorsichtig* ‘cautious’
- Iteration: *permanent/ wiederholt* ‘permanent’/ ‘repeated’

Result object readings can be indicated by (among others):

- Physical change: *überreichen / erscheinen* ‘present’/ ‘appear’
- Location: *auf dem Tisch liegen / vorliegen* ‘lie on the table’/ ‘be available’
- Size, shape etc.: *lang, hoch, rot sein* ‘be long, high, red’

These indicators are well studied (cf. Ehrich and Rapp 2000, Heid et al. 2007), nevertheless there is much work remaining to distinguish straightforward cases from ambiguous ones, e.g. *exact, precise, to show, to support*, about which I will say more in section 6. In addition to local indicators like these, we find a variety of other types exemplified in 2.2 – 2.4.

2.2 Structural indicators — coordination and sense relations

If we have a construction with coordination within the sentence we expect the two conjuncts to be of the same sortal type. If we look at example (4) we recognize that *Einschätzung* ‘estimation’ is unambiguous and can only be interpreted as an event; so we can infer that the conjunct *Messung* ‘measuring’ has an event reading, too:

- (4) Die Divergenz zwischen [Einschätzung]_{EV} und **Messung** könnte unter diesen Umständen also bedeuten: Der Mensch hört allmählich schlechter, aber er merkt es nicht.(cosmas²)
'The divergence between the estimate and the measurement could mean: humans hear gradually worse, but they don't recognize it.'

The structuring within the sentence plays a role here but we should also look at examples with coordination across sentences as in (5):

- (5) Bei der **Messung** [am 30. Juli]_{EV} an der Romanshorerstrasse 12 war es gar fast jedes dritte Fahrzeug, das die Geschwindigkeitsbegrenzung überschritt. Auch bei der **Kontrolle** auf der Staatsstrasse im Rohrenmoos beim Restaurant Traube waren es nicht viel weniger. (cosmas)
'During the measurements on July 30th every third car drove too fast. At the check at Rohrenmoos it also wasn't fewer.'

The date *am 30. Juli* 'on July 30th' indicates that *Messung* 'measurement' refers to an event. In the next sentence *Kontrolle* 'check' is used synonymously to avoid repetition, so that it has a strong preference for an event reading, too. In addition, the anaphoric function of the discourse particle *auch* 'also' hints at this synonymous relation as well. Another way to determine the sortal reading of a nominalization is by means of sense relations as in (6):

- (6) Die **Messung** [am Handgelenk]_{EV} ist von allen [**Methoden**]_{hyperonyme} die praktischste. Das Gerät wird mit der Manschette am linken Handgelenk befestigt.
'Of all techniques measuring on the wrist is the most practical one.'

In this context *Methoden* 'methods' functions as a hyperonyme to *Messung* 'measuring' and as a method can only refer to an event, the hyponym *Messung* can be inferred to denote an event, too. As we have seen, there are different kinds of indicators other than the well studied local ones. In addition, we even find similar phenomena within the wider discourse exemplified in 2.3.

2.3 Temporal structure of the discourse as an indicator:

In (8) the ongoing discourse promotes or warrants a sortal shift, the verb *abschließen* 'complete' is telic and so a result from this action is suggested.

² Examples marked with 'cosmas' are taken from the cosmas corpus of the IdS Mannheim: <https://cosmas2.ids-mannheim.de/cosmas2-web/>

- (8) Die Messung ist gestern [abgeschlossen worden]_{EV}. Sie [spricht eine deutliche Sprache / fiel positiv aus]_{RE}.
'The measuring was completed/ finished yesterday. It speaks for itself/ was positive.'

We can proceed with this result in the ongoing discourse and even refer back to the nominalization with the pronoun *sie* 'she', since the measuring that was interpreted as an event in the first sentence has been finished.

These discourse phenomena are more or less neglected in the literature, but aspectual properties of the predicates and anaphoric relations are crucial for the interpretation in many cases.

- (9) Die Emissionen von Feuerungsanlagen müssen alle zwei Jahre überprüft werden. Die [im März durchgeführte]_{EV} **Messung** zeigt im [nun vorliegenden Bericht]_{RE} auf, dass die für diese Feststoff-Feuerungsanlage anzuwendenden Emissionsgrenzwerte deutlich unterschritten und somit bestens eingehalten werden. (cosmas)
'The measurements conducted in March show in the report now available that the prescriptive limits are under-run and hence are adhered to.'

In (9) the temporal structure is emphasized in addition with the date *im März (durchgeführt)* '(conducted) in March' and the present participle (*nun vorliegend* '(now) available', which shifts the perspective to the present. The result of the measuring is also denoted by the non-derived object 'report'.

In this chapter I have shown, that there are many different means for sortal indication which play a role in the composition process, some applying locally and some applying in the wider context. Now I will come back to further examples for the double reading paradox before I present a new explanation for the DRP.

3. Sorts at odds: The double reading paradox

We have seen that there is a variety of methods to indicate a reading in context and we often find more than one indicator for the referential sort of the nominalization. Thus, it is not surprising that we also find a great number of instances where the different indicators are in conflict. For the sake of clarity I will focus on examples with local indicators of the type *Event-Result* and *Result-Event* to investigate this phenomenon in more depth.

Event-Result

In (10) the adjective *langwierig* ‘tedious’ modifies an event whereas the VP *brachte mir viel Geld ein* ‘earned me a lot of money’ predicates over a result object:

- (10) Die [langwierige]_{EV} **Übersetzung** [brachte mir viel Geld ein]_{RE}.
‘The tedious translation earned me a lot of money.’

The first part of example (11) includes the telic verb *abschließen* ‘complete’ which indicates the completed event of translating a work, but the conjunction proceeds with the result object predicate *erscheinen* ‘appear’:

- (11) Die **Übersetzung** dieses Werks konnte bereits 1990 [abgeschlossen werden]_{EV} und als erster Band des Gesamtprojekts [erscheinen]_{RE}.
‘The translation of this work could already be completed in 1990 and could appear as the first volume of the overall project.’

One could be tempted to think that the transition from an event to an object that results from this event is somewhat easier to achieve than from the result to the event, but we also find examples like (12) and (13):

Result-Event

- (12) 1514 [überreichte]_{RE} er Louis XII die [[schwierige]_{EV} **Übersetzung**] von Texten des Thukydides.³
‘In 1514 he gave Louis XII the difficult translation of texts by Thucydides.’

- (13) Die **Übersetzung** [lag endlich auf dem Tisch]_{RE} — sie hatte wirklich [6 Monate gedauert]_{EV}.
‘The translation was finally on the table — it had really taken 6 months.’

The backshift in time in the previous example seems to be emphasised by the construction with the adverb *endlich* ‘finally’, whereas the second sentence gives kind of a motivation or explanation for the use of the adverbial modification with *endlich* ‘finally’. I can only hint at the additional conditions of temporal structure here, which we should pay attention to. We even find cases where there is a shift from an interpretation as a result to an event, and it again proceeds with a result indicator as in (14):

³ http://www.hist.unizh.ch/ag/e-learning/bdb_detail.php?id=468, 18.06.2007

Result-Event-Result

- (14) Nur wenn man die genaue Bezeichnung des Videosystems kennt, kann man abschließend sagen, ob die [vorliegende]_{RE} **Messung** [regelmäßig durchgeführt]_{EV} wurde und somit [verwertbar]_{RE} wäre.
'You can only tell whether the measurement at hand was conducted regularly and thus is usable, if you know the precise name of the video system.'

In these examples we have at least two different reading triggers, one within the DP and one within the sentence: *vorliegend* 'at hand' indicates a result, just like *verwertbar* 'usable', whereas only an event can be conducted regularly (*regelmäßig durchgeführt*). The question arises as to how the DRP can be solved, since it poses a problem for compositionality⁴ and annotation, as the nominalization's reading cannot be definitely determined.

Before I clarify Nunberg's general notion of predicate transfer, which I will then apply to the DRP, I will first give an overview on different meaning shift principles to see if they can account for the DRP.

4. Types of Sortal Shift

Since nominalizations can have different sortal references — I have focused on event and result object readings here — depending on the context they occur in, we need a theory of sortal shift to account for how this ambiguity comes about. Most approaches attribute a sortal shift to the nominalization itself, as I will outline in 4.1 – 4.3, but they differ in that they involve lexical, structural and semantic types of shifts. In chapter 5 I will deal with a pragmatic type of shift that does not focus on the nominalization itself.

4.1 Underspecified meaning of suffixes

Theories on the lexical semantics of affixes deal with their contribution to the meaning of the (sortally ambiguous) derivatives and the question whether an affix has an abstract core meaning common to all its occurrences. The explanation for the variety of sortal references would be that *-ung* is underspecified or polysemous and needs contextual information (from the base and the sentence environment) to specify its function. See Plag (1998) and Lieber (2004) for underspecified representations of the lexical semantics of affixes, which treat them similarly to the underspecified meanings of ambiguous words.

⁴ Ambiguity in general is often used as an argument for non-compositionality (cf. Pagin and Westerståhl (to appear), Pelletier 2004: 145ff.). However, in the DRP cases we do not only have to deal with the specification of one word in context, but with two different readings entering into the composition process at the same time.

4.2 Structural ambiguity

The systematic shift from event readings to result readings and the interpretation of nominalizations could also be attributed to differences in its internal structure (cf. Schäfer (this volume), Alexiadou 2001, t.a.; Rossdeutscher &, Kamp & Solstad & Reyle 2007). According to this view, different layers and the “height” of the suffix attachment play a role for the respective shifting potential, as well as the distinction between root- and non root derived nominals.

4.3 Conceptual shift / coercion as lexical ambiguity

Pustejovsky (1995) deals with alternations that appear with simple nouns as well. Frequent types are among others:

Product/producer alternation:

- (15) a. John spilled coffee on the **newspaper**.
b. The **newspaper** fired its editor

Process/result alternation:

- (16) a. The company's **merger** with Honda will begin next fall.
b. The **merger** will lead to the production of more cars.

He assumes that certain alternations are systematic and should be compositionally derived. Hence, he enriches the lexicon with generative and compositional aspects, so that we have a structural template to which semantic transformations can be applied. This template consists e.g. of aspects like telic role or purpose to which certain constructions can refer then.

In (17) the verb *begin* needs an event type as a complement, so we have to coerce the noun *novel*. Depending on the context, this can lead to different interpretations on the basis of the lexical entry:

- (17) a. The author began **the novel** last month. (= write the novel)
b. John began **the novel** last month. (= read the novel)

Similar alternations can be observed with nominalizations and thus Pustejovsky treats simple nouns and nominalizations equally with respect to this:

- (18) difficult translation, difficult text
a. difficult to write (event)
b. difficult to read (result)

4.4 Problems with the DRP

All these analyses account for the different sortal readings a nominalization can have and for their specification in context, but they would have difficulties in dealing with the DRP cases: we would have to think of two structures or readings in the same context and could not determine the interpretation of the nominalization. I will now turn to another type of (in this case pragmatic) enrichment as an alternative solution for these special cases, which is less systematic and less lexical.

5. Meaning shift as pragmatic enrichment

Nunberg (1979, 1995) developed a theory of pragmatic processes for meaning transfer or meaning enrichment. In his 1995-paper he defines the general notion as follows: “‘Transfers of meaning’ are linguistic mechanisms that make it possible to use the same expression to refer to disjoint sorts of things.” He maintains the notion of *predicate transfer* especially for context dependent cases⁵, as e.g.: “The ham sandwich sits at table 7”.

While most researchers have focused on nouns, Nunberg (1995) shows that meaning shift or meaning transfer can affect the argument *or* the predicate in a sentence. He calls the latter *predicate transfer* and illustrates the contrast between the two kinds of metonymic transfer by means of the following examples. (19a) and (20a) are uttered in a situation where a customer hands his key to an attendant at a parking lot:

- (19) a. **This** is parked out back.
b. {**This**_{key} = *the car*} is parked out back.
→ transfer of argument meaning / deferred ostension
- (20) a. **I am parked out back.**
b. I am {*the owner of a car that is parked out back*}
→ predicate transfer

Assuming that shifted entities constitute referential islands we can test which constituent is shifted by a coordination test:

- (21) a. {**This**_{key} = **the car**}_i is parked out back and may not start_i.
b. #{**This**_{key} = **the car**}_i fits only the left front door_{key} and is parked out back_i.

⁵ But also for systematic polysemy, cf. Nunberg 1995: 116ff.

- (22) a. I_j am **{the owner of a car that is parked out back}**_j and have been waiting_j for 15 minutes.
b. #I am **{the owner of a car_i that is parked out back}** and may not start_i.

Although both types of meaning transfer are metonymic of the type owner/car, they differ in whether the transfer affects the argument or the predicate. In (21) we can go on with a predicate referring to the car (*and may not start*) whereas this doesn't work with (22). Other diagnostics for the transfer position by Nunberg show that the number and gender of the demonstrative depends on the intended referent (the car)⁶, and if we have a language with gender marked demonstratives and adjectives, these agree with the referent (the car). This is not the case with "I am parked out back"; hence we recognize once more that it is not the pronoun *I* that is affected by the transfer principle here.

Note also that if the derived property is expressed by a description here, only deferred ostension is blocked (cf. Nunberg 1995: 111ff.):

- (23) *The key I'm holding is parked out back.
But: The man with the cigar (Mr....) is parked out back.

Thus, once a predicate is applied to the noun 'key' it cannot be shifted. This brings us back to my treatment of the DRP cases, as I assume that the nominalization cannot be shifted a second time — to match local selectional restrictions — once the first modifier has suggested a reading. Having considered these tests it should be clear that we have to deal with different kinds of shifts.

Nunberg's notion of predicate transfer can also account for sortal crossings as in (24), which represent the DRP phenomenon with simple nouns (cf. Nunberg 1995, 2004), by suggesting that we actually deal with two properties of persons here:

- (24) Roth is Jewish and [**widely read**]_{books}.
→ Roth is Jewish and **{a person whose books are [widely read]_{books}}** person

We can apply this mechanism to the DRP cases since the pragmatic enrichment by predicate transfer allows for the shifting in meaning of the nominalization's context, rather than the nominalization itself (see above). I repeat example (2) and (3) as (25) and (26):

⁶ "This is parked out back" would be used in the case that several presented keys fit one car and "These are parked out back" for one key that fits several cars.

- (25) Die [wiederholten]_{EV} Messungen [**belegen**]_{RE}, dass...
‘The repeated measurements show that there hasn’t been an improvement.’
→ Die [wiederholten]_{EV} Messungen {**haben Resultate, die [belegen]_{RE}** }_{EV},
dass...
{have results that [show]...}

The first indicator *wiederholt* ‘repeated’ modifies an event and so the second (result-) indicator *belegen* ‘show’ is enriched to an event predicate as well. In (26) we first have a modification with *vorliegend* ‘at hand’, so that the nominalization is indicated as a result reading and is preserved as such by enriching the second (event-) indicator *regelmäßig durchgeführt* ‘conducted regularly’ into a result predicate:

- (26) Nur wenn man die genaue Bezeichnung des Videosystems kennt, kann man abschließend sagen, ob die [vorliegende]_{RE} Messung [**regelmäßig durchgeführt wurde**]_{EV} und somit [verwertbar]_{RE} wäre.
‘You can only tell whether the measurement at hand was conducted regularly (...), if you know the precise name of the video system.’
→ ob die [vorliegende]_{RE} Messung {**das Ergebnis einer Handlung ist, die [regelmäßig durchgeführt wurde]_{EV}** }_{RE} und somit [verwertbar]_{RE} wäre
... {is the result of an event that [was conducted regularly...]} }

As an intermediate summary, we recognize that since we do not have to shift the nominalization, we only have to deal with one reading for the nominalization; hence predicate transfer allows for an analysis of the double reading paradox which enables us to preserve compositionality.

6. Condition on predicate transfer

As the notion of predicate transfer is a very general mechanism I will give Nunberg’s condition and constraints in this chapter and I will show which cases they should exclude.

- (20) a. I am parked out back.
→ b. I am {*the owner of a car that is [parked out back]*}.

Nunberg (1995, 112) states the following condition on predicate transfer:

- (27) **Condition on predicate transfer**
Let A and A' be sets of properties that are related by a salient transfer function $g: A \rightarrow A'$ Then if F is a predicate that denotes a property $P \in A$,

there is also a predicate F' , spelt like F , that denotes the property P' , where $P' = g(P)$.

Applied to example (20) this specifies the following enriched predicate:

(28) **Predicate transfer of *parked out back***

Let *car* and *owner of a car* be sets of properties that are related by a salient transfer function g (being the owner of): $car \rightarrow owner\ of\ a\ car$. Then if *parked out back* is a predicate that denotes the property of *being parked out back* ε *being a car*, there is also a predicate *parked out back'*, spelt like *parked out back*, that denotes the property of *being the owner of a car that is parked out back*, where *being the owner of a car that is parked out back* = $g(\textit{parked out back})$



[parked out back] \Rightarrow {*the owner of a car that is [parked o.b.]*}

In other words: the name of a property that applies to cars can also be applied to their owners through the salient relation of ownership. The constraints for the application of this mechanism are thus the following:

- (i) there is a salient functional relation between the bearers of the properties, and
- (ii) the enriched version is noteworthy in the utterance situation for the identification or classification of the bearer.

That means it is noteworthy and helpful to classify customers according to their orders (as in “The ham sandwich is at table 6”) and the situation of a driver through properties of his car. In addition, there can be other aspects that influence or facilitate transfer possibilities: as I have noted earlier, among the several kinds of sortal indicators there are some predicates that easily show predicate transfer between events and results, because it is not clear which readings they actually indicate, e.g.:

(29) *exact, precise, to show, to support*

Meaning Transfer and Nominalizations

Consider the phrase *die präzisen Messungen* ‘the precise measurements’: if the results are precise they are such because of a precisely conducted event and so the modifier cannot clearly indicate one or the other reading.

To come back to noteworthiness let us consider some of Nunberg’s examples that fulfill this constraint and some which do not:

(30) Ringo was hit in the fender by a truck when he was momentarily distracted by a motorcycle.

→ Ringo {*owns a car that [was hit in the fender by a truck]* when he was momentarily distracted by a motorcycle

(31) ?Ringo was hit in the fender by a truck two days after he died.

→? Ringo {*owns a car that [was hit in the fender by a truck]* two days after he died.}

Obviously, it is not noteworthy for Ringo what happens to his car when he is already dead and so we get an odd sentence if we try to classify his car by a dead man’s name. If we try to apply this to sentences with nominalizations, the following examples are excluded for the same reason: because noteworthiness is not given here either, e.g. the material of a result object (*hölzern* ‘wooden’) doesn’t seem to be so naturally connected to the event and its duration, as shown in (32), at least not without a suitable special context. In (33) we have the predicate *geht weiter* ‘continues on’, which indicates an ongoing change, that cannot be implicitly related to a perceivable result state (*sichtbar* ‘observable’), because you cannot really see the actual progression from outer space, but only the result of it (that there is no rainforest anymore).

#Result-Event

(32) ?Die [hölzerne]_{RE} Absperrung [hat drei Tage gedauert]_{EV}.

‘The wooden blocking has taken three days.’

→? The wooden_{RE} blocking {*is the result of an event that [has taken three days]*_{EV}_{RE}

#Event-Result

(33) ?Die Abholzung des Regenwaldes [geht weiter]_{EV} und ist aus dem Weltall [sichtbar]_{RE}.

‘The cutting down of the rainforest continues on and can be observed from outer space.’

→? ... continues on and {*the result [can be observed from outer space]*_{RE}_{EV}

Note also the subtle difference if we only change the modifier of the nominalization within the same construction:

- (34) a. Die [zufällige]_{EV} Ausgrabung wird im Museum [ausgestellt]_{RE}.
‘The coincidental excavation will be exposed in the museum.’
b. ?Die [mühsame]_{EV} Ausgrabung wird im Museum [ausgestellt]_{RE}.
‘The tedious excavation will be exposed in the museum.’

My intuition concerning (34) is that in a. the relation is more salient or noteworthy as it is something special to discover something by chance and that is why it is exposed, while in b. it is not. But it is clear that these are only first intuitions and we have to investigate and classify the character of those relations in more depth. Nevertheless, I have shown that there are crucial differences in acceptability that somehow have to be accounted for and that the factors introduced by Nunberg seem to play a role in that.

7. Summary and open questions

In this paper I have dealt with the systematic alternation between event and result readings (among other readings) of German *-ung* nominalizations. The examples have shown that the linguistic context provides different indicators for event or result readings, some applying locally, some in the wider context. To account for this phenomenon there are different theories or types of meaning shift of nominalizations, namely lexical, structural, semantic (cf. section 4) and pragmatic shifts (section 5).

Except for the latter, they focus on shifts concerning the nominalization itself and hence they cannot explain the *double reading paradox*. Nevertheless they should not be seen as incompatible with the analysis pursued in this paper. There is a considerably high number of instances with conflicting indicators, where one and the same nominalization expresses two readings. Instead of shifting the nominalization, the embedding context can be enriched or modified so that we have only one reading; to achieve this I have applied Nunberg’s notion of *predicate transfer*. As this mechanism does not act on the assumption that the nominalization has two readings at the same time, we are able to preserve compositionality.

Predicate transfer is a very powerful pragmatic principle that is restricted by the principles of salient functions and noteworthiness. We need more tests to shed light on the diagnostics for salience of relations between two indicators. It allows us to account for a particular type of meaning alternation, leaving other types for other theories of meaning shift operations (cf. section 4), which then do not have to be complicated. Predicate transfer is a general shifting principle that can give new insights into a variety of phenomena e.g. the context dependent shifts of simple nouns, restrictions in systematic polysemy (cf. Nunberg 1995), the DRP and resultative adverbs (cf. Geuder 2002).

Additionally, this paper has shown that the (wider) context is worth an in-depth investigation. I have dealt with one contextual type here; other ones such as discourse relations and temporal aspects have only been touched upon and leave

further work for the future to achieve a broad understanding of the interpretation of nominalizations in context.

References

- Alexiadou, A. 2001. Functional structure in nominals. Nominalization and ergativity. Amsterdam: John Benjamins.
- Alexiadou, A. & Grimshaw, J. to appear. Verbs, nouns and affixation. In: *Deverbal Nouns*, eds. G. Dal, P. Miller, L. Toven, D. Van de Velde. Amsterdam : John Benjamins.
- Bierwisch, M. 1989. Event Nominalization: Proposals and Problems. In: *Wortstruktur und Satzstruktur*, ed. W. Motsch, 1–73. Berlin: Akademie der Wissenschaften der DDR; Zentralinstitut für Sprachwissenschaft.
- Ehrich, V. & Rapp, I. 2000. Sortale Bedeutung und Argumentstruktur: ung-Nominalisierungen im Deutschen. *Zeitschrift für Sprachwissenschaft* 19: 245–303.
- Geuder, W. 2002. Oriented Adverbs. Issues in the Lexical Semantics of Event Adverbs. Doctoral Dissertation, University of Konstanz.
- Heid, U. et al. 2007. Indicators for sortal readings of German nominalizations with *-ung*: properties and extraction from corpora. Paper presented at the SFB 732 colloquium “Theoretical and Computational Perspectives on Underspecification”, University of Stuttgart, 3.11.2007.
- Lieber, R. 2004. Morphology and lexical semantics. Cambridge: University Press.
- Nunberg, G. 1979. The Non-Uniqueness of Semantic Solutions: Polysemy. *Linguistics and Philosophy* 3, 143–184.
- Nunberg, G. 1995. Transfers of Meaning. *Journal of Semantics* 12.2, 109–132.
- Nunberg, G. 2004. The Pragmatics of Deferred Interpretation. In: *The Handbook of Pragmatics*, eds. Laurence Horn & Gregory Ward, 344–364. Oxford: Blackwell.
- Pagin, P. and Westerstahl, D. to appear. Compositionality.
- Pelletier, F. J. 2004. The Principle of Semantic Compositionality. In: *Semantics. A Reader*, eds. Steven Davis & Brendan S. Gillon, 133–156. Oxford: Oxford University Press.
- Plag, I. 1998. The Polysemy of *-ize* derivatives: On the role of semantics in word formation. In: *Yearbook of Morphology*, eds. G. Booij & J. van Marle, 219–242. Dordrecht: Kluwer.
- Pustejovsky, J. 1995. *The Generative Lexicon*. Cambridge, MA: MIT Press.
- Pustejovsky, J. 1998. The Semantics of Lexical Underspecification. *Folia Linguistica* 32, 323–347.
- Roßdeutscher, A. , Kamp, H., Solstad, T. & Reyle, U. 2007. Lexical and supra-lexical underspecification rooted in a dm-based theory of word formation. Paper presented at the SFB 732 colloquium “Theoretical and Computational Perspectives on Underspecification”, Universität Stuttgart, 3.11.2007.

Regine Brandtner

Regine Brandtner
Department of Linguistics/ German
University of Stuttgart
Heilbronner Str. 7
70174 Stuttgart

regine.brandtner@ling.uni-stuttgart.de