

The flexibility of idioms and language-specific constraints on syntactic operations

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Athens, October 26, 2015

1 Introduction

Theoretical claims in this paper:

- The syntactic properties of idioms follow from the general properties/rules/... of a language and from lexical specifications.
- Against *en bloc* analysis of idioms: Idioms with regular syntactic shape should not be treated by phrasal lexical entries.
- Syntax-semantics interface: Data provide additional support for a syntax-semantics interfaced based on (i) redundant marking, (ii) multiple occurrences, and (iii) underspecification
- What is an *idiom*? I don't care. Usually a combination of one or more extremely collocationally restricted words.

Phenomena:

- Passive; based on joint work with Sascha Bargmann (Frankfurt a.M.), in particular Bargmann & Sailer (2015b)
- Possessive alternations; based on Sailer (2015a,b)

Method

- Primarily German data; comparison with English where possible
- Empirical generalization
- Attempt to provide a formal modeling with in a surface-oriented, constraint-based grammar formalism: Head-driven Phrase Structure Grammar (HPSG, Pollard & Sag (1994)), using the syntax-semantics interface of Lexical Resource Semantics (LRS, Richter & Sailer (2004))

Motivation

- Wasow et al. (1983) and Nunberg et al. (1994): Two types of idioms
 - *idiomatically combining expressions*:
spill the beans (reveal information), pull strings (exert influence)
syntactically flexible, semantically decomposable.
 - *idiomatic phrases*:
kick the bucket (die), saw logs (snore)
syntactically fixed, semantically non-decomposable

- Argumentation in Nunberg et al. (1994): Some syntactic operations rely on idiom parts contributing meaning. These are, then, only possible for decomposable idioms.
- Proposed analysis in Nunberg et al. (1994)
 - idiomatically combining expressions: lexical analysis
individual lexical entries for the words in the idiom; each such word has syntactic and semantic properties;
these combine by the ordinary rules of syntax and of combinatorial semantics;
“Collocational challenge”: the words of the idiom may only be used if they all occur together in a given domain.
 - idiomatic phrases: phrasal lexical entry for the entire idiom
only the phrase is assigned a meaning
only the phrase as a whole will enter syntactic and semantic combinatorics.
- Problems beyond English: Some syntactic flexibility in non-decomposable idioms: Schenk (1995) for Dutch; Gaatone (1993), Ruwet (1991) for French
- Problems within English mentioned in Kay & Sag (ms.): Morphological processes (agreement), idiom-internal modifiers (Ernst, 1981).

In this paper:

- Empirical domain: Syntactic alternations that are (largely) truth-conditionally neutral, i.e., that don't necessarily require that idiom parts have meaning.
 - (1) a. Passive: Alex read the book. = The book was read by Alex.
 - b. Possessive alternation:
 Alex tut der Kopf weh. = Alex tut sein Kopf weh.
 Alex.DAT does the head pain Alex.DAT does his head pain 'Alex's head aches.'
- Generalize the lexical analysis of idioms to those non-decomposable idioms that are of a regular syntactic shape.
- “Compositionality challenge”: How can the regular semantic combination deal with the non-decomposability of these idioms?

Structure of the talk

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2 Passive

2.1 English

Passive only for verbs that have a complement:

- (2) a. Alex opened the door. → The door was opened (by Alex).
- b. They danced. → *There/it was danced.

Status of the passive subject:

- Kuno & Takami (2004) (p. 127): Subjects of English passive sentences are (weak) topics.
- Ward & Birner (2004): Passive subjects must be relatively discourse old, i.e., at least not the discourse-newest element in the clause.
- Expletives as passive subjects?
 - (3) Expletive complements are excluded (Postal & Pullum, 1988):
Alex winged it. → *It was winged (by Alex).
 - (4) Kay & Sag (ms.): Expletives can occur as subjects in passive
 - a. There_i was believed [to be [another worker]_i at the site besides the neighbors who witnessed the incident].
 - b. It_i was [rumored that Great Britain, in apparent violation of the terms of the Clayton-Bulwer treaty, had taken possession of certain islands in the Bay of Honduras]_i.

Summary

- English passive promotes a complement to be topic.
- Passive only possible with verbs that have a complement.
- The passive subject must be “topical”, i.e., ideally present or inferable from the preceding context.
- “Local” expletives cannot be passive subjects.

2.2 German

Examples mainly taken from Müller (2013) (p. 287f.).

- (5) Passive with transitive verbs:

Karl öffnet das Fenster. → Das Fenster wird (von Karl) geöffnet.
 Karl opens the window the window is (by Karl) opened

‘Karl is opening the window.’ ‘The window is being opened (by Karl).’

- (6) Passive with non-transitive verbs:

a. Leute tanzen hier. → Hier wird getanzt. (intransitive, unergative)
 people dance here here is danced
 ‘People are dancing here.’

- b. Alex hilft dem Mann. → Dem Mann wird geholfen. (oblique complement)
 Alex helps the.DAT man the.DAT man is helped
 ‘Alex is helping the man.’ ‘The man is being helped.’

No passive for subjectless verbs:

- (7) Müller (2013), p. 295 :
 a. Dem Student graut vor der Prüfung.
 the.DAT student is.terrified of the.DAT exam
 ‘The student is terrified by the exam.’
 b. *Dem Studenten wird (vom Professor) vor der Prüfung gegraut.
 the.DAT student is (by.the professor) of the.DAT exam terrified

No passive for verbs with expletive subject:

- (8) Heute regnete es. → *Heute wurde geregnet.
 today rained it today was rained (Müller, 2013, p. 293)
 ‘It was raining today.’

Müller (2013): unaccusative verbs do not passivize, see (9-a), unless there is a special modal reading (of generality or obligation).

- (9) Unaccusatives
 a. Der Zug kam an. → *Hier wurde angekommen.
 the train came on Here was arrived
 ‘The train arrived.’ (Müller, 2013, p. 289)
 b. Hier wird nicht angekommen, sondern nur abgefahren.
 here is not on.come but only away.driven
 ‘One doesn’t arrive here but only departs.’ (Müller, 2013, p. 305)
 (10) Modal reading allows for passive of *haben* (*have*):

Hier wird keine Angst gehabt.
 here is no feared had

‘Nobody is afraid here.’ / ‘You’d better not be afraid!’

Summary of German passive

- German passive demotes the subject.
- Passive is only possible for verbs that have a subject.
- The demoted subject must be referential.
- Passive with unaccusative verbs is possible, but has special effects (such as generality, obligation)

Predictions for idiom data If idioms follow the ordinary rules of grammar, we expect that ...

- there are German idioms that have passive, while structurally analogous English idioms don’t.
- passivizability of German idioms is hardly restricted.
- passivizability of English idioms is highly dependent on the question of whether the passive subject can be a topic.

3 Possessive constructions

One possessor expression in English, four alternatives in German.

- (11) I have already put on my make-up, but I still need to powder my nose.

- (12) Ich hab mich schon geschminkt, aber ...
 (I have already put on my make-up, but ...)
- ich muss noch die Nase pudern. (*Def*)
 I must still the nose powder 'I still need to powder my nose.'
 - Ich noch meine Nase pudern. (*Poss*)
 I must still my nose powder
 - Ich muss mir noch die Nase pudern. (*DatDef*)
 I must myself still the nose powder
 - Ich muss mir noch meine Nase pudern. (*DatPoss*)
 I must myself still my nose powder
 The same within the inventory of idioms.

3.1 Possessive readings

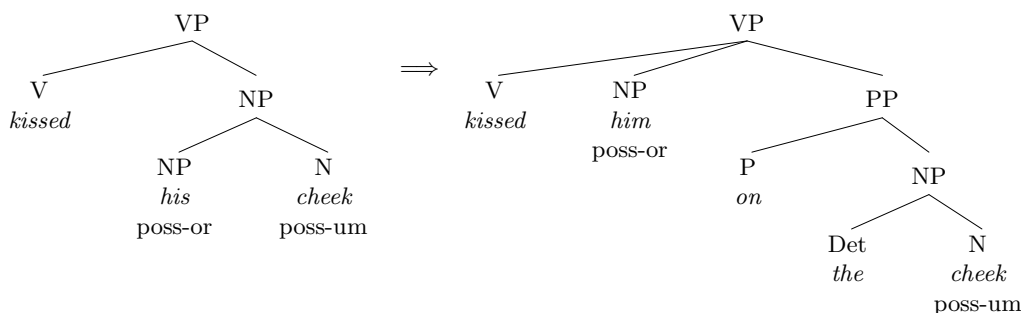
Generally assumed: "possession" is a cover relation for a set of possible semantic relations.

- Barker (1995) possessor is ambiguous:
 - when combined with a relational noun: no semantic contribution
 - when combined with a non-relational noun: introduction of some possessor relation
- Wunderlich (1996) $\mathbf{Poss}(x, y)$ means "x has y at x's disposal".
- Jensen & Vikner (2004)
 - list a number of possible relations and how they can be linked to the lexical semantics of the possessum.
 - Non-relational nouns can be turned into relational nouns, activating some function from their qualia structure.
 - If no relational meaning of a noun is used, a possessor expresses a predicate that is similar to Wunderlich's possessor relation.

3.2 Possessor raising

Real Possessor Raising:

- Structure:



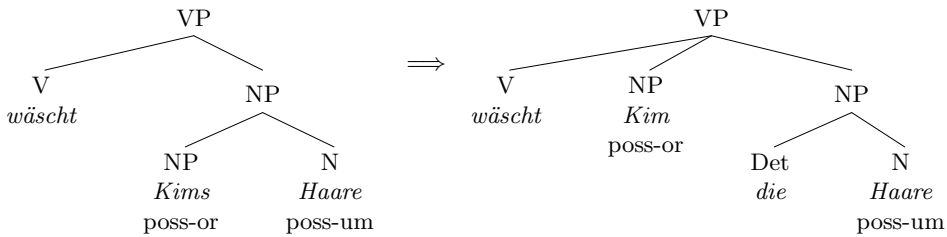
- The raised possessor does not receive a thematic role from the verb.
- Haspelmath (1999): Possessor raising wide spread in the languages of the world.

External dative possessor construction

- (13) a. Alex wäscht Kims Haare.
 Alex washes Kim.GEN hair 'Alex is washing Kim's hair.'
- b. Alex wäscht Kim die Haare.
 Alex washes Kim.DAT the hair

- The **DatDef** (and the **DatPoss**) constructions are not possessor raising in the original sense.

- Structure:



- Possessor appears in oblique case
- Haspelmath (1999):
 - External possessor (EP) construction differs from possessor raising.
 - External possessor is typologically rare, but wide-spread in the languages of Europe, independent of their genetic relationship, i.e., it is an areal feature of “Standard Average European”. Present in Dutch, German, Romance, Slavic, Greek, Maltese
 - EP is absent from English and the Scandinavian languages (see also Lødrup (2009) for Modern Norwegian)
 - **Animacy hierarchy:** Possessor is 1st/2nd person $\subset \dots \subset$ inanimate
 - **Situation hierarchy:** Eventuality is patient affecting \subset dynamic non-affecting \subset stative
 - **Inalienability hierarchy:** Possessum is body part $\subset \dots \subset$ contextually unique item
 - **Syntactic relation hierarchy:** Possessum is PP $\subset \dots \subset$ transitive subject
- German EP is relatively low on the hierarchies: Animate possessor, eventive verb, possessum contextually unique, unergative subject
Dutch: more restricted (Haspelmath, 1999); Modern Hebrew: less restricted (Linzen, 2014)

Predictions for our idiom data

- Since dative external possessors are common in German, we expect to find them in the inventory of idioms, not being more flexible with respect to the hierarchies than what we find outside idioms.
- (Note: Lødrup (2009) observes that external possessors occur in Norwegian only in fixed expressions—they are relics of an earlier state of the language where an external possessor construction had still been productive.)

3.3 Semantics of the German dative external possessor

- (14) Dem Ede juckt die Kopfhaut. (Hole, 2005, p. 215) (**DatDef**)
 the.DAT Ede itches the scalp ‘Ede’s scalp itches.’

Hole (2005): Dative encoded affectee role.

- Dative in EP construction is always affected!
- \Rightarrow A semantic role can be added, Affectee.
- Proto-role entailments of affectees (Hole, 2005, p. 220):
 - Affectees are consciously/sentiently involved in the eventuality at hand, i.e. they have one property of the Agent Proto-Role.
 - Affectees are causally affected by the eventuality at hand, i.e. they have one property of the Patient Proto-Role.

Hole (2005): The possessum NP has a contextually fillable possessor slot.

- Nouns can be turned into relational nouns productively (see also Jensen & Vikner (2004))
- Definite NP has an open (contextually fillable) possessor slot.
- Affected Dative is introduced with an Affectee role and can control this possessor slot

3.4 Redundant marking of the possessor inside the possessum

Lee-Schoenfeld (2006): Possible, but not with body-part nouns:

- (15) Data and judgements from Lee-Schoenfeld (2006), p. 105
- a. Mein Bruder hat der Mami leider ihr Auto zu Schrott gefahren. (**DatPoss**)
my brother has the mom.DAT unfortunately her car to scrap driven
'Unfortunately my brother totaled mom's car.'
- b. ?Ein guter Ehemann massiert seiner Frau jeden Abend ihren Rücken. (?**DatPoss**)
a good husband massages his wife.DAT every evening her back
'A good husband massages his wife's back every night.'

Naturally occurring examples of **DatPoss**:

- (16) ... dann breche ich ihm seine verdammte Hand (**DatPoss**)
then break I him.DAT his damn hand
'then I will break his damn hand.'

German possessive pronouns can be bound by a clause-mate antecedent ((16), (17)).

- (17) [Die Kinder]_i lesen [ihre_i Lieblingsbücher]
the children read their favorite books

So, whenever a definite possessum can occur with an affectee, a possessive should be possible inside the possessor NP as well.

(Note: our data point in the opposite direction: Whenever **DatPoss** is possible, so is **DatDef**)

3.5 Possessor relations without additional arguments

Possessive interpretation of a clause-mate body part term.

- (18) a. Alex hebt den Fuß. (*Def*)
Alex lifts the foot 'Alex is lifting her foot.'
- b. Alex hebt ihren Fuß. (**Poss**)
Alex lifts her foot

In German: No real possessor *raising*, only possessor *control* (Deal, 2013). Only if the possessor constituent and the possessum constituent can occur with the predicate independently of the possessor construction.

- (19) a. Die Katze kratzt mich.
the cat scratches me.ACC
- b. Die Katze kratzt am Stuhlbein.
the cat scratches on.the chair leg
- c. Die Katze kratzt mich am Bein. (*Def*)
the cat scratches me.ACC on.the leg
'The cat is scratching my leg.'

Lødrup (2009) reports that the possessor need not be an argument of the verb in Norwegian. In German, a dative external possessor construction must be used in such cases.

- (20) a. *Eminem spyr ham i ansiktet.* (Norwegian, Lødrup (2009))
 Eminem vomits him in face.DEF
 ‘Eminem vomits in his face.’
 b. **Eminem spuckt ihn ins Gesicht.* (German)
 Eminem vomits him.ACC in.the face
 c. *Eminem spuckt ihm.DAT ins Gesicht.* (German, dative EP)
- (21) a. *Legen bør da lyse deg i halsen.* (Lødrup, 2009)
 physician.DEF should then light you in throat.DEF
 ‘The physician should then shine a light in your throat.’
 b. *Dann sollte der Arzt dir/ *dich in den Hals leuchten.*
 then should the physician you.DAT/ you.ACC in the throat light

German does not have a valence changing possessor raising rule. However, there is a special possessor interpretation, living on existing valence patterns.

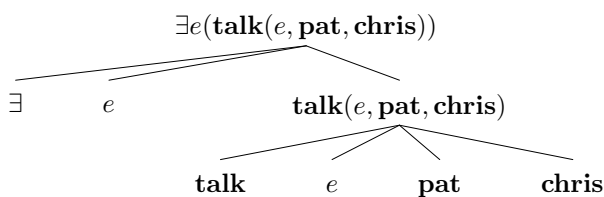
4 Framework for the analysis

- Head-driven Phrase Structure Grammar (Pollard & Sag, 1994):
 - surface-oriented syntax, monostratal
 - complex feature structures instead of complex syntactic structures
 - constraint-based
 - Lexical Resource Semantics (Richter & Sailer, 2004): linguistically motivated version of underspecified semantics (Pinkal, 1996; Egg, 2011)
1. The “logical form” of a sentence is a semantic representation of its reading (encoded as value of the feature EXTERNAL-CONTENT (EXCONT):

- (22) Pat talked to Chris.
 $[\text{EXCONT } \exists e(\text{talk}(e, \text{pat}, \text{chris}))]$

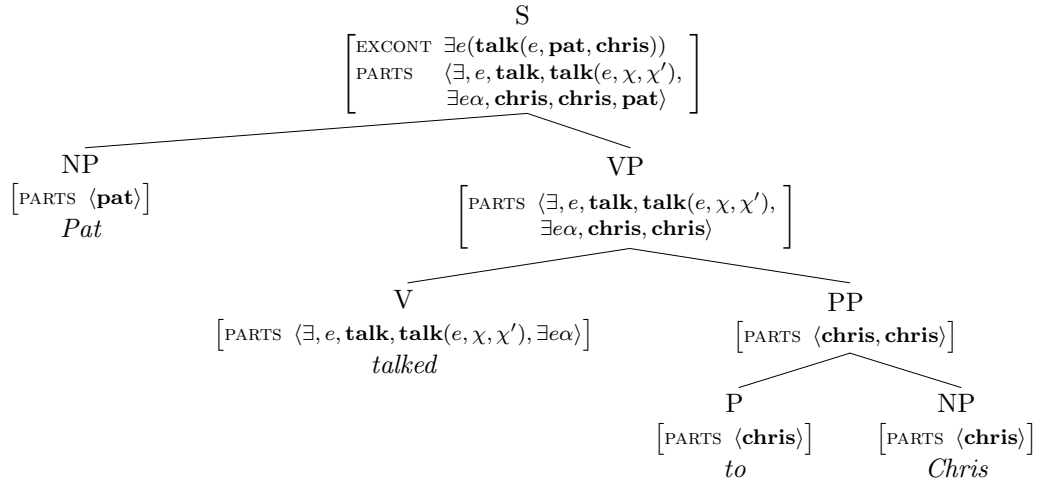
2. All subexpressions of the sem.rep. must be contributed by some lexical elements.

- (23) $\exists e(\text{talk}(e, \text{pat}, \text{chris}))$:



3. Constraint-based lexical semantics: A word says: if I am used in a sentence, the sentence’s semantic representation must at least contain the following subexpressions:
4. For sentences: The sem.rep. of a sentence must consist exactly of the elements of the sentence’s PARTS list. (Everything on the PARTS list must be used, nothing else can be used)

(24) Semantic constraints contributed by the nodes in the tree



5. Words and structures may impose constraints on how the bits of sem.rep. can be combined:

- *talk*: $\mathbf{talk}(e, \chi, \chi')$ is a subexpression of α (short: $\mathbf{talk}(e, \chi, \chi') \triangleleft \alpha$)
- Linking theory: $\mathbf{pat} \triangleleft \chi$ and $\mathbf{chris} \triangleleft \chi'$

6. **Redundant contribution**: Several words can contribute the same bit of logical form (**chris**)

7. **Multiple occurrences**: An element that occurs only once on the PARTS list can nonetheless be used several times inside the overall semantic representation (e)

Alternative display 1:

word	PARTS list	constraints
Pat	pat	
talked	$\exists, e, \mathbf{talk}, \mathbf{talk}(e, \chi, \chi'), \exists e\alpha$	$\mathbf{talk}(e, \chi, \chi') \triangleleft \alpha, \mathbf{pat} \triangleleft \chi, \mathbf{chris} \triangleleft \chi'$
to	chris	
Chris	chris	

Alternative display 2:

word	Semantic representation
Pat	$\exists e(\mathbf{talk}(e, \mathbf{pat}, \mathbf{chris}))$
talked	$\exists e(\mathbf{talk}(e, _ _ _))$
to	chris
Chris	chris

Redundant contribution as the norm:

- Multiple exponency, concord, ... is widely used in natural language: Negative concord (Richter & Sailer, 2006), cognate objects (Sailer, 2010), non-decomposable idioms (Bargmann & Sailer, 2015b)
- However: Some expressions do not participate in concord.

(25) Standard French:

- a. *Personne n'a rien dit.*
 nobody not.has nothing said 'Nobody said anything.'

- b. *Personne n'a pas parlé.*
 nobody not.has not spoken 'Nobody has NOT spoken'

- Contribution constraint (Penn & Richter, 2004, 2005)
- We can mark if a bit of logical form may only occur once on the PARTS list of a sentence:

- (26) Negative elements in French:
 a. *personne (nobody), rien (nothing)*: $(-\alpha)^+$
 b. *pas (not)*: $(-\alpha)^1$

- Unless specified otherwise, all semantic contributions are contributed as potentially redundant.

5 The 2-dimensional theory of idioms

- Follows the tradition of Wasow et al. (1983), Nunberg et al. (1994), Kay & Sag (ms.)
- Any syntactically idiosyncratic idiom (*kingdom come*) is licensed by a *phrasal lexical entry* [Constructional dimension of idiosyncrasy]
- Any syntactically regular idiom is licensed by the regular combinatorial mechanism. The words in the idiom may have idiom-specific semantics. Their co-occurrence is regulated by collocational specifications [Collocational dimension of idiosyncrasy]
 - decomposable idioms (*spill the beans, pull strings*): The words have a clearly identifiable semantics.
 - non-decomposable idioms (*kick the bucket*): some of the words have an empty semantics (Kay & Sag, ms.) *or*: some of the words make a redundant semantic contribution (Bargmann & Sailer, 2015a)

Decomposable idioms:

- (27) Alex spilled the beans.
 $\exists e(\mathbf{spill_id}(e, \mathbf{alex}, (\iota x : \mathbf{bean_id}(x))))$

- *spill the beans, pull strings*
- The words have a clearly identifiable semantics.
- Collocational constraints:
 - idiomatic *spill*: the index of the second semantic argument must also be a semantic argument of the idiomatic *beans*.
 - idiomatic *beans*: the index of the idiomatic *beans* must also occur inside the second semantic argument of the idiomatic *spill*.
- Exactly the same analysis for German decomposable idioms such as *die Strippen ziehen (pull the strings), ...*

(28) Analysis

word	PARTS	constraints	collocation
Alex	alex		
spilled	$\exists, e, \mathbf{spill_id}, \mathbf{spill_id}(e, \chi, \chi'), \exists e\alpha$	$\mathbf{spill_id}(e, \chi, \chi') \triangleleft \alpha,$ $\mathbf{alex} \triangleleft \chi, x \triangleleft \chi'$	x occurs inside the argument of bean_id
the	$\iota, x, (\iota x : \beta)$	$x \triangleleft \beta$	
beans	$x, \mathbf{bean_id}, \mathbf{bean_id}(x)$		x is inside an argument slot of spill_id

Non-decomposable idioms:

(29) Alex kicked the bucket.
 $\exists e(\mathbf{kick_bucket_id}(e, \mathbf{alex}))$

- *kick the bucket, saw logs*
- The words have a redundant semantic contribution
- Collocational constraints:
 - idiomatic *kick*: selects an argument with the same index and the same core semantic contribution
 - idiomatic *bucket*: is selected by a word that has the same index and the same core semantic contribution
- Exactly the same analysis for German non-decomposable idioms such as *den Löffel abgeben (die)*

(30) Analysis

word	PARTS	constraints	collocation
Alex	alex		
kicked	$\exists, e, \mathbf{kick_bucket_id}, \mathbf{kick_bucket_id}(e, \chi), \exists e\alpha$	$\mathbf{kick_bucket_id}(e, \chi) \triangleleft \alpha, \mathbf{alex} \triangleleft \chi$	selects an argument with index e and semantic contribution kick-bucket_id
the	$\exists, e, \exists e\beta$	$e \triangleleft \beta$	
bucket	$e, \mathbf{kick_bucket_id}, \mathbf{kick_bucket_id}(e, \chi')$		is selected by an element with index e that contributes kick-bucket_id

The collocational constraints enforce that: $\alpha = \beta$ and $\chi = \chi'$

6 Idioms and passive

6.1 German

Properties of German passive:

- German passive demotes the subject.
- Passive is only possible for verbs that have a subject.
- The demoted subject must be referential.
 Expletives are analyzed as having a redundant semantic contribution.
 Constraint: The index of the active subject may not be shared by any other argument of the verb.
- Passive with unaccusative verbs is possible, but has a special modal reading (such as generality of obligation)

(31) No passive with expletive subjects

- a. Hier regnet_e es_e Bindfäden.
 here rains it strings 'It is raining cats and dogs here.'
- b. *Hier werden/wird Bindfäden geregnet.
 here is.PL/SG strings rained

Passive with idiom-external direct object:

(32) etwas zur Schau stellen ('put something on display')

Die Möbel wurden zur Schau gestellt.
the furniture was on display put

'The furniture was displayed.'

Passive with idiom-internal direct object:

(33) jemandem den Garaus machen ('kill someone')

den lästigen Hausgenossen soll nun ... der Garaus gemacht werden
the.DAT annoying housemates should now ... the Garaus made be

'The annoying housemates should now be killed.'
(Dobrovol'skij, 2000, p. 561)

Passive with non-decomposable idiom:

(34) Bei den Grünen wird der politische Löffel schon vor Amtsabschied abgegeben.

with the Green is the political spoon already before resigning passed on

'In the Green party, people die politically already before resigning from their office.'¹

Example analysis:

(35) Decomposable idiom: *die Strippen ziehen* (*pull the strings*)

a. Die Strippen wurden von Alex gezogen.

the strings were by Alex pulled

b. $\exists e(\text{pull_id}(e, \text{alex}, (\iota x : \text{strings_id}(x))))$

- Lexicon: Lexical entries of the idiomatic versions of *Strippen* and *ziehen* just as in (28)
- Syntax: your favorite analysis of passive
- Semantics: ordinary semantic combinatorics, just as in (28).

(36) Non-decomposable idioms: *den Löffel abgeben* (*die*)

a. Da wurde der Löffel abgegeben.

there was the spoon on.passed 'Someone died there.'

b. $\exists x \exists e(\text{kick_bucket_id}(e, x))$

- Lexicon: Lexical entries of the idiomatic versions of *Löffel* and *abgeben* just as in (30)
- Syntax: your favorite analysis of passive
- Semantics: ordinary semantic combinatorics, just as in (30).

6.2 English

Why is it usually said that *kick the bucket* cannot passivize?

Restriction on the discourse status of passive subjects: They must not be the discourse-newest element in the sentence; ideally they are present or inferable from the preceding context.²

¹<http://www.kontextwochenzeitung.de/politik/148/erst-schreien-wenn-etwas-geschafft-ist-1992.html>, accessed: 12/19/2014

²In a recent talk, Christiane Fellbaum presented two additional naturally occurring examples of *kick-the-bucket* passives and passives of other English idioms that express the idea of "dying". In as far as context is included in her examples, they also satisfy the topicality requirement. See: <http://www.crisp.be/wp-content/uploads/2015/04/Talk7-Fellbaum.pdf>, accessed: 08/27/2015

- (37) When you are dead, you don't have to worry about death anymore. ... The bucket will be kicked.³
- (38) saw logs ('snore')
I excitedly yet partially delusional turned to Alexandria to point out the sun as it set and all I see is eyelids and hear *logs being sawed*. Come on! I can't say too much because I wasn't far behind as I was catching flies [= sleeping] about a minute later.⁴
- (39) have a cow ('get angry')
There was really no need for the police to have a cow, but a cow was *had*, resulting in kettling, CS gas and 182 arrests.⁵

Present approach covers the attested examples of passivization and, at the same time, explains the marginal status of such cases!

7 Idioms and German possessive constructions

English: Strategy with possessive determiner prevails: *keep one's cool, lose one's mind*, ...

German: All four construction types are possible, but not with all idioms.

- (40) a. Er hat ihr Herz gebrochen. (Poss)
He has their heart broken 'He broke their hearts.'
- b. #Er hat *das* Herz gebrochen. (*Def*)
- c. Er hat **ihnen** *das* Herz gebrochen. (**DatDef**)
- d. Er hat **ihnen** ihr Herz gebrochen. (**DatPoss**)

- 145 possessive idioms from *Duden 11*
- Tested for occurrence in the four possessive patterns in corpora and internet

# (N=145)	<i>Def</i>	<u>Poss</u>	DatDef	DatPoss	example idiom
2	ok	ok	ok	ok	(sich) etwas an den Fingern abzählen (können)
2	ok	ok	ok	*	sich etwas aus dem Ärmel ziehen
0	ok	ok	*	ok	—
29	ok	ok	*	*	für jm. die Hand ins Feuer legen
0	ok	*	ok	ok	—
2	ok	*	ok	*	(sich) die Ärmel hochkrempeln
0	ok	*	*	ok	—
5	ok	*	*	*	die Nase voll haben
17	*	ok	ok	ok	jm. das Herz brechen
14	*	ok	ok	*	jm. die Füße küssen
0	*	ok	*	ok	—
1	*	ok	*	*	in jms. Fußstapfen treten
36	*	*	ok	ok	sich die Hacken ablaufen
36	*	*	ok	*	jm. im Weg stehen
1	*	*	*	ok	sich seine Gedanken machen

Observations:

1. 15 possible patterns: 5 common, 5 rare, 5 quasi inexistent
2. Datives are very common in possessive idioms.
3. Few idioms allow for both a dative (**DatDef**, **DatPoss**) and plain definite (*Def*).

³J. Pascha & M. Louis, *The Single Man*, iUniverse. p. 195.

⁴<http://5050experience.sportsblog.com/posts/1125677/feast.html>, accessed: 07/24/2015

⁵<http://www.theguardian.com/commentisfree/2012/aug/01/cyclists-like-pedestrians-must-get-angry>, accessed: 08/24/2015

4. Whenever **DatPoss** is possible, so is **DatDef**.
5. Some idioms forbid a redundant possessive marking (*Def*-only, **DatDef**-only, Poss—**DatDef**).

Dative Affectees

- Hole (2005): Dative has *Affectee* role: Affectee is consciously involved and causally affected
- Affectee Lexical Rule: A dative affectee argument is added.
- Syntax: $[\text{ARG-ST } \langle \boxed{1} \mid \boxed{A} \rangle] \Rightarrow [\text{ARG-ST } \langle \boxed{1}, \boxed{2} \text{ NP}[\text{CASE } \textit{dat}] \mid \boxed{A} \rangle]$
- Semantics: $\exists e(\dots) \Rightarrow \exists e(\dots \wedge \mathbf{Affectee}(e, x_{\boxed{2}}) \dots)$

External possessors

- Haspelmath (1999), External possessor construction
- External Possessor Lex. Rule: Add generalized possessor relation between two arguments.
- Syntax: no change. $[\text{ARG-ST } \langle \dots, \boxed{1}, \dots, \boxed{2}[\text{DEF } +], \dots \rangle]$
- Semantics: $\exists e(\dots \wedge \mathbf{Arg}_i(e, \iota x_{\boxed{2}} : \dots) \dots) \Rightarrow \exists e(\dots \wedge \mathbf{Arg}_i(e, \iota x_{\boxed{2}} : \dots \wedge \mathbf{Poss}(x_{\boxed{2}}, x_{\boxed{1}}) \dots)$
- Haspelmath (1999): Dative external poss. as areal phenomenon of Standard Average European *Sprachbund*.

7.1 Example analysis: (*jemandem*) *das Herz brechen* (*break someone's heart*)

	$\exists e(\mathbf{hurt}(e) \wedge \mathbf{Agent}(e, x) \wedge \mathbf{Theme}(e, \iota z : \mathbf{feelings}(z) \wedge \mathbf{Poss}(z, y)))$
(40-a) Er_x brach <u>ihr</u> _y Herz _z	$\exists e(\mathbf{hurt}(e) \wedge \mathbf{Agent}(e, x) \wedge \mathbf{Theme}(e, \iota z : \mathbf{feelings}(z) \wedge \mathbf{Poss}(z, y)))$
(40-b) $\# \text{Er}_x$ brach <i>das</i> Herz _z	$\exists e(\mathbf{hurt}(e) \wedge \mathbf{Agent}(e, -) \wedge \mathbf{Theme}(e, \iota z : \mathbf{feelings}(z) \wedge \mathbf{Poss}(z, y)))$
	$\exists e(\mathbf{hurt}(e) \wedge \mathbf{Agent}(e, x) \wedge \mathbf{Aff}(e, y) \wedge \mathbf{Theme}(e, \iota z : \mathbf{feelings}(z) \wedge \mathbf{Poss}(z, y)))$
(40-c) Er_x brach+ Aff +ExPoss ihnen _y <i>das</i> Herz _z	$\exists e(\mathbf{hurt}(e) \wedge \mathbf{Agent}(e, x) \wedge \mathbf{Aff}(e, y) \wedge \mathbf{Theme}(e, \iota z : \mathbf{feelings}(z) \wedge \mathbf{Poss}(z, y)))$
(40-d) Er_x brach+ Aff brach+ Aff +ExPoss ihnen _y <u>ihr</u> _y Herz _z	$\exists e(\mathbf{hurt}(e) \wedge \mathbf{Agent}(e, -) \wedge \mathbf{Aff}(e, -) \wedge \mathbf{Theme}(e, \iota z : \mathbf{feelings}(z) \wedge \mathbf{Poss}(z, y)))$

7.2 Other alternation classes

Idioms with *Def*—*Poss* alternation

- (41) Ich würde (***mir**) für euch *die/meine* Hand ins Feuer legen.
 I would myself for you the/my hand in.the fire put ‘I would vouch for you.’

- Lexical representation:
 Syntax: NP_x [für NP_y] [Det[def] Hand_z] [ins Feuer] legen
 Semantics: ‘X put X’s trust in Y’
 $\exists e(\text{invest}(e) \wedge \text{Agent}(e, x) \wedge \text{Theme}(e, \iota z : (\text{trust}(z) \wedge \text{Poss}(z, x))) \wedge \text{Goal}(y))$
- Verb: contributes **Poss**-relation lexically.
- Determiner: either definite article or redundant marking of **Poss** by poss. determiner
- Possessor: either multiple occurrence of subj. index or redundant marking by subj. and poss. det.
- Semantics incompatible with an Affectee \Rightarrow no dative

Idioms with *DatDef*—*DatPoss* alternation

- (42) Wir laufen *(**uns**) *die/unsere* Hacken ab, um euch zu helfen.
 we run ourselves the/our heels away to help you ‘We run off our feet to help you.’

- Lexical representation: Affectee role included, **Poss** required.
- Determiner: either definite article or redundant marking of the possessor by poss. determiner

Idioms with *Poss*—*DatDef* alternation

- (43) Alex küsst *(**euch**) *die* Füße/ Alex küsst (***euch**) *eure* Füße
 Alex kisses you the feet/ Alex kisses you your feet ‘Alex licks your boots.’

- Lexical representation:
 Syntax: NP_x [Det[def] Füße] küssen Paraphrase: ‘x obey y’s will’
- Verb: **Poss** required, Affectee possible \Rightarrow either poss. det. or *Affectee LR* + *External Poss. LR*
- Verb blocks redundant marking: Possessor (*y*) can only be introduced once within verb’s arguments.
- We express lexical generalizations in terms of *lexical rules* (Müller, 2006)
- A lexical rule can change any property of a word. Here: the valence requirements and the semantics.
- External Possessor Lexical Rule: introduces a possessor-possessum relation within the selection domain of a verb.
- Affectee Lexical Rule: introduces an additional dative NP complement with an Affectee role.

7.3 General patterns

- **Observation 2:** Dative possessors are common in MWEs, just as they are in German in general.
- **Observation 3** (*DatDef*/*DatPoss* rarely alternates with *Def*): Possessively interpreted *Def* requires a possessor as co-argument. So the subject or another argument must be the possessor. A dative is then only possible if it is an inherent reflexive or the subject referent is an Affectee as well.
- **Observation 5** (Redundant marking excluded) *Poss*-only, *DatDef*-only, *Def*—*DatDef*, *Poss*—*DatDef*

- **Observation 4** (**DatPoss** implies **DatDef**): If dative is an Affectee, **DatPoss** and **DatDef** have the same semantics. We can exclude red. marking (**DatPoss**) but not multiple occurrence (**DatDef**).
- **Observation 1**:
 - 5 non-existing patterns: would require **DatPoss** without **DatDef**.
Special case *sich seine Gedanken machen* (‘make oneself one’s thoughts’, ‘contemplate’): inherent reflexive dative, possessive syntactically required.
 - 5 rare patterns
 - * *Def—Poss—DatDef—DatPoss*, *Def—Poss—DatDef*, *Def—DatDef*:
Dative but also plain Def possible, see observation 3
 - * **Poss**-only: Lexical requirements that possessor not affected nor co-argument.
 - * *Def*-only: Possessor is subject and non-redundancy is enforced.

8 Conclusion

Back to the main claims:

- Passivizability and possessive alternations follow from the general patterns of the respective languages and from the lexical specifications of the idioms.
- A lexical analysis is to be preferred over a phrasal analysis even for non-decomposable idioms.
- Syntax-semantics interface: Lexical analysis requires a solution to the *compositionality challenge*. Lexical Resource Semantics provides such a solution:
 - Redundant marking:
Words in non-decomposable idioms make redundant semantic contribution.
Blocking redundant marking accounts for some alternation patterns.
 - Multiple occurrence: We cannot block multiple occurrence of elements that are contributed to the semantics: Whenever **DatPoss** is possible, so is **DatDef**.
 - Underspecification: Words may require semantic material that they do not contribute themselves.
- What is an idiom? There is a continuum between free combinations and co-occurrence/collocational preferences/restrictions. Since there is no clear-cut difference, why attribute a theoretical status to the distinction? Here: Distinction useful as descriptive categories, but no principled difference.

Related issues:

- Redundancy-based approach has advantages over approach with empty semantics for some parts of the idiom (à la Kay & Sag (ms)).
- Consequences for integration into computational systems (parser, generator, ...)?
- Lexical approach does not reflect our intuition that the idiom is a lexical unit (“lexicalization”, Fleischer (1989); Burger (1998))

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