

A Nanosyntax Analysis of Idioms

Will Nediger, University of Michigan · BCGL 8, June 4, 2015

wnediger@umich.edu

Outline

- I. Non-lexicalist approaches: DM and Nanosyntax
- II. Why non-lexicalism?
- III. Syntactic flexibility of idioms: some data
- IV. Proposal: Idioms are not syntactically special
- V. Co-occurrence restrictions in Nanosyntax

Non-lexicalist approaches

- Distributed Morphology (Halle and Marantz 1993):
 - Syntax is fed by morphosyntactic features
 - Terminal nodes (sets of morphosyntactic features) are spelled out post-syntactically by Vocabulary Items, which specify a phonological form
 - Post-syntactic morphological operations (e.g. Morphological Merger, Fusion) can combine features to form complex terminal nodes
 - The Encyclopedia provides idiosyncratic semantic information

Non-lexicalist approaches

- Nanosyntax (Starke 2009):
 - Has Late Insertion, like DM
 - Only features can be terminal nodes (there are no post-syntactic morphological operations)
 - Lexical items spell out subtrees composed of features (Spell-Out is cyclic, taking place after each application of Merge)
 - Lexical items are like a combination of Vocabulary Items and the Encyclopedia: they include a phonological form, the subtree it spells out, and any unpredictable semantic information

Non-lexicalist approaches

- An extremely simple example:
 - Merge the features [N] and [plural] to make the tree [N plural]
 - We can spell out the root with any noun – say, *cat*
 - -s spells out the feature [plural]
 - We could try spelling out the tree with *goose* and -s
 - But we also have a lexical item *geese*, which spells out the tree [N plural]
 - If a tree can be spelled out by one lexical item instead of two, it must be
 - So **gooses* is ruled out

Why non-lexicalism?

- Stepping back from the differences between DM and Nanosyntax
- A brief summary of Marantz's (1997) arguments against lexicalism
- Lexicalism says that words are created in the lexicon, distinct from the way words are combined to make syntactic structures
- Prediction: Words can have special meanings of the sort that roots have, but phrasal idioms cannot

Why non-lexicalism?

- “Transmission” doesn’t have the range of possible meanings which “blick” does
- Roots, not words, can have special meanings
- Chomsky’s (1970) “Remarks on Nominalization” – the nominalization “growth” is intransitive, unlike the verb “grow”
- If words are derived in the lexicon and we can derive the transitive verb “grow,” why can’t we derive the transitive noun “growth”?
- Marantz: the root ν GROW represents an internally caused change of state, incompatible with an external agent

Why non-lexicalism?

- In a non-lexicalist approach like DM, phrasal idioms are to be expected
- Words are idiomatic in the same sense that phrasal idioms are – their meaning must be specified in the Encyclopedia
- Roots take on a particular meaning in a particular syntactic context
- ν GROW takes on a particular meaning in the context of n
- ν KICK takes on a particular meaning in the context of ν BUCKET (and vice versa)

Syntactic flexibility of idioms

- Nunberg et al. (1994): semantically decomposable idioms are more syntactically flexible than non-decomposable idioms

- (1)
- a. The beans were spilled
 - b. Those beans, John would never spill
 - c. Mary has spilled many beans
 - d. The beans are easy to spill
 - e. John spilled the beans, but Mary didn't spill them

Syntactic flexibility of idioms

- (2)
- a. *The bucket was kicked
 - b. *That bucket, John would never kick
 - c. *You only kick one bucket
 - d. *The bucket is easy to kick
 - e. *John kicked the bucket, but Mary didn't kick it

(All judgments apply to the idiomatic reading only)

Syntactic flexibility of idioms

- But it's also clear that non-decomposable idioms can undergo some transformations:

(3) **V2 in German** (Schenk 1992)

Morgen *beisst er ins* *Gras*
tomorrow bites he into.the grass
'Tomorrow he bites the dust'

(4) **German fronting** (Ackerman and Webelhuth 1993):

Den Vogel hat Hans abgeschossen
the bird has Hans shot.off
'Hans stole the show'

Syntactic flexibility of idioms

(5) **French V-to-T movement**

Il me pose souvent un lapin

He to.me places often a rabbit

'He often stands me up'

(6) **English adjectival modification** (Ernst 1981)

a. She kicked the proverbial bucket

b. She kicked the social bucket

Proposal

- There is no strict syntactic distinction between decomposable and non-decomposable idioms (or between idioms and non-idiomatic structures)
- In principle, idioms can undergo any syntactic transformation
- The flexibility of idioms is restricted by the semantics: a transformation is impossible if it would not result in a licit semantic interpretation
- The difference in behavior between decomposable and non-decomposable idioms is a reflex of this semantic restriction

Proposal

- Passive
 - Passives in English have frequently been analyzed as having a topic/comment structure, where the theme argument is the topic (e.g. Frey 2000, Hupet and Le Bouedec 1974)
 - *The bucket* in *kick the bucket* has no interpretation independent of *kick*; it receives no theta role and does not refer
- Hence **The bucket was kicked* is ungrammatical, since *the bucket* cannot be topic
- *The beans were spilled* is grammatical, because *the beans* does refer, and receives a theme theta role

Proposal

- Topicalization
 - Semantically/pragmatically, the topicalized constituent is typically said to be old information about which something is said
 - Since *the bucket* receives no independent interpretation in *kick the bucket*, it cannot be topicalized
 - What about the German data, repeated here?
 - (4) **German fronting** (Ackerman and Webelhuth 1993):
Den Vogel hat Hans abgeschossen
the bird has Hans shot.off
'Hans stole the show'
 - Nunberg et al. (1994) show that this is not true topicalization, as the fronted chunk has no special semantic or pragmatic role (in fact, even non-constituents can undergo this fronting)

Proposal

- Similar arguments apply to tough movement, quantification, and pronominal reference – the rest of the transformations in (1) and (2)
 - Tough movement has also been analyzed as creating a topic-comment structure (e.g. Callies 2008)
 - Quantifiers take arguments of type $\langle e,t \rangle$, so only DPs which are interpreted as a predicate can be quantified
 - Only DPs which refer can undergo pronominal reference
- In contrast, German V2 (3) and French V-to-T movement (5) are syntactic phenomena which are not dependent on the moved idiom chunk having an independent interpretation

Proposal

- The adjectival modifications which are possible with non-decomposable idioms are *external*, rather than *internal*, in Ernst's (1981) terminology
- In *kick the filthy habit*, the adjective semantically modifies the noun, which has an independent interpretation
- The adjectives in *kick the proverbial bucket* and *kick the social bucket* are semantically equivalent to adverbs ("Proverbially, John kicked the bucket" / "Socially, John kicked the bucket")

Proposal

(7) **Khalkha Mongolian echo reduplication** (Kubo 1997)

a. *üxr-ijn nüd*

cow-GEN eye

‘blackcurrant’

b. *üxr-ijn nüd mūd*

cow-GEN eye RED

‘blackcurrant and other things’

≠ ‘blackcurrant and other cow-related things’

c. **üxr-ijn nüd müxr-ijn nüd*

cow-GEN eye RED

d. **üxer müxr-ijn nüd*

cow RED-GEN eye

Proposal

- With non-idiomatic noun-noun compounds, either noun can be targeted for reduplication, with different interpretations

- (8)
- a. *Mongol-yn tüüx*
Mongol-GEN history
'Mongolian history'
- b. *Mongol-yn tüüx müüx*
Mongol-GEN history RED
'Mongolian history and other things' OR
'Mongolian [history and other things]'
- c. *Mongol Zongol-yn tüüx*
Mongol RED-GEN history
'The history of Mongolia and other countries'

Proposal

(9) **Czech focus fronting** (Fanselow 2004)

BOUdu na mě ušil

hut.ACC for me he.stitched

‘He has cheated me’

Can only have a VP/TP focus interpretation – the idiom chunk itself is not semantically focused

Proposal

- (9) **English *shm*-reduplication**
- a. Pay the piper, shmay the piper
 - b. Pay the piper, pay the shmiper
 - c. Pay the piper, shmay the shmiper

All three are possible (at least for some speakers), but crucially, all target the whole idiom, not individual chunks – e.g., (9b) doesn't mean “I don't care about the piper,” it means “I don't care about paying the piper”

Proposal

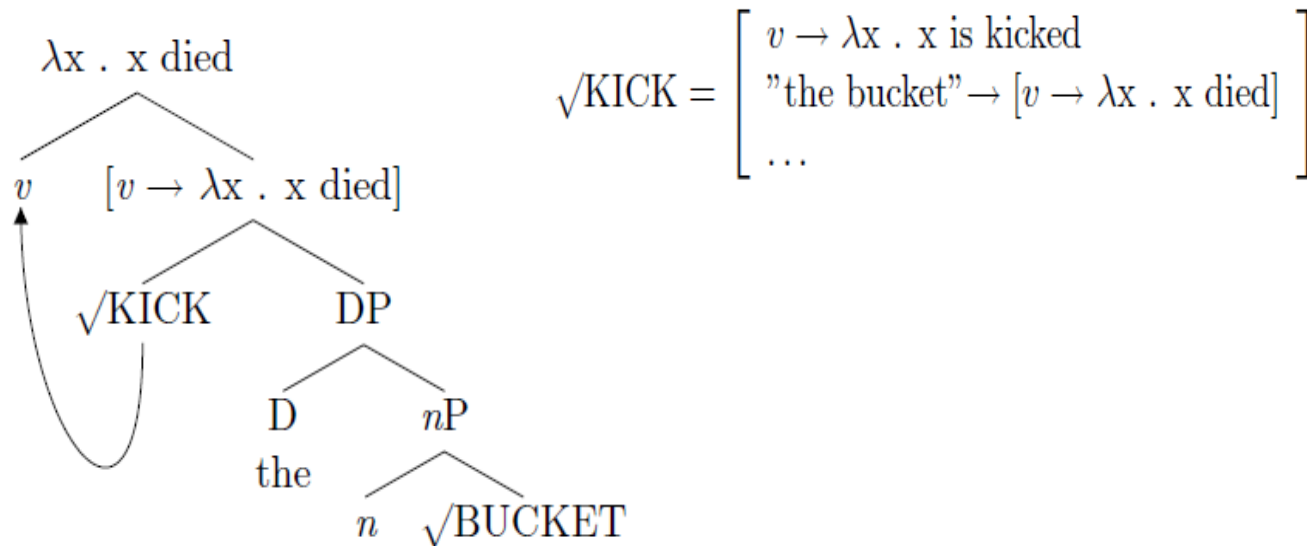
- So, there is no syntactic difference between decomposable and non-decomposable idioms – both must be inserted as separate chunks, so the chunks can undergo syntactic transformations
- As a result, we need co-occurrence restrictions on idiom chunks
- We need to know that, when *kick* and *the bucket* co-occur, they can take on an idiomatic interpretation
- We also need to know that *spill* can only mean “divulge” when it co-occurs with *beans*, to rule out **spill the secret*

Co-occurrence restrictions

- Marantz simply specifies co-occurrence restrictions in the Encyclopedia
 - *Kick* means “to die” in the context of *bucket*
 - *Bucket* means nothing in the context of *kick*
- This is perhaps somewhat unsatisfying – why should *kick* carry the entire idiomatic meaning?

Co-occurrence restrictions

- It is possible in DM to distribute the idiomatic meaning over the entire idiom (Pham 2011):



Co-occurrence restrictions

- Jackendoff (1997) points out that co-occurrence restrictions on individual lexical items become very unwieldy with idioms more complex than simple verb-object idioms:
 - *Strike while the iron is hot*
 - *Let the cat out of the bag*
 - *A chip off the old block*
 - *{V} one's heart out*

Co-occurrence restrictions

- Nanosyntax provides an interesting alternative way of incorporating co-occurrence restrictions
- Recall that Nanosyntax includes lexically stored subtrees
- These subtrees can also include pointers to other lexical items
- So, in addition to having the lexical items *kick* and *bucket*, we can have a lexically stored idiom *kick the bucket*, with pointers to *kick* and *bucket*
- If at any point in the derivation the relevant subtree is built up, it can be given the idiomatic interpretation, which is specified in the lexical entry for *kick the bucket*

Co-occurrence restrictions

- Having *kick*, *bucket* and *kick the bucket* in the lexicon might seem redundant
- But we need to store *kick* and *bucket* (with their normal interpretations) in the lexicon anyway, and we also need to store the idiom as a whole (whose interpretation is unpredictable) somewhere

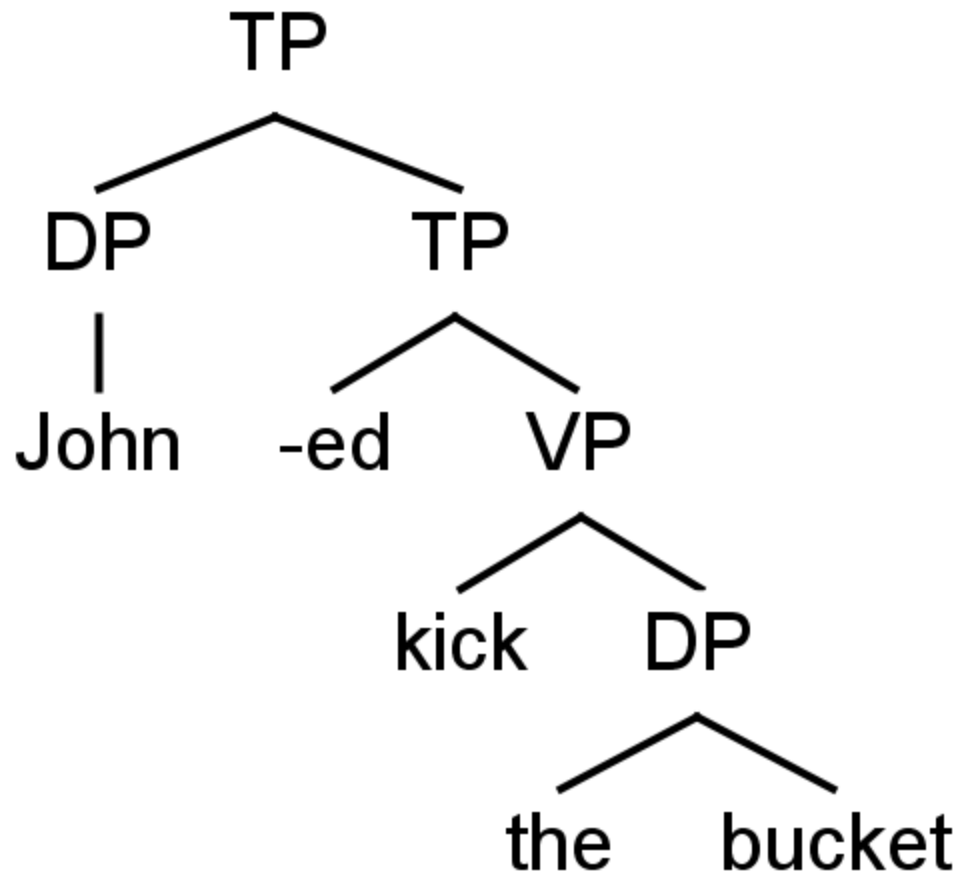
Co-occurrence restrictions

- Notice that, like in DM, encyclopedic information isn't present in the syntax – just morphosyntactic features
- So technically, *kick* and *bucket* aren't present in the syntax, just verbal and nominal feature complexes
- This is why the lexical entry for *kick the bucket* contains pointers – the pointers say that the *kick the bucket* subtree is only there if the lexical entries *kick* and *bucket* have been spelled out
- Recall that Spell-Out is cyclic

Co-occurrence restrictions

- To deal with an idiom like *{V} one's heart out*, just don't include a pointer in the verbal position
- The subtree for *{V} one's heart out*, then, will contain a complex of features which will be present no matter what verb is used to spell it out (subject to restrictions on what sorts of verbs are possible in such a construction – there will be some feature encoding intransitivity, for instance)

Example



Summary

- Idioms are built up syntactically in the same way as words and sentences
- Idioms can undergo any syntactic transformation which results in a semantically interpretable structure
- Co-occurrence restrictions on idiom chunks can be captured with lexically stored trees

Thank you!

References

- Ackerman, F. and Webelhuth, G. 1993. Topicalization and German complex predicates. La Jolla & Chapel Hill: University of California, San Diego & University of North Carolina, ms.
- Callies, M. 2008. Argument realization and information packaging in tough-movement constructions. In Gabrys-Barker, D. (ed.), *Morphosyntactic Issues in Second Language Acquisition*, 29-46. Clevedon: Multilingual Matters.
- Ernst, T. 1981. Grist for the Linguistic Mill: Idioms and 'Extra' Adjectives. *Journal of Linguistic Research* 1: 51-68.
- Fanselow, G. 2004. Cyclic Phonology-Syntax Interaction: Movement to First Position in German. *Interdisciplinary Studies on Information Structure* 1: 1-42.
- Frey, W. 2000. A medial topic position in German. *Linguistische Berichte*.
- Halle, M. and Marantz, A. 1993. Distributed morphology and the pieces of inflection. In K. Hale and S. J. Keyser (eds.), *The View from Building 20*, 111-176. Cambridge, MA: MIT Press.
- Hupet, M. and Le Bouedec, B. 1974. Definiteness and voice in the interpretation of active and passive sentences. *Quarterly Journal of Experimental Psychology* 27: 323-330.
- Jackendoff, R. 1997. *The Architecture of the Language Faculty*. Cambridge, MA: MIT Press.
- Kubo, T. 1997. Reduplication meduplication in Khalkha Mongolian. *Gengo Kenkyu* 112: 66-97.
- Marantz, A. 1997. No escape from syntax: Don't try morphological analysis in the privacy of your own lexicon. In A. Dimitriadis, L. Siegel, C. Surek-Clark and A. Williams (eds.), *Penn Working Papers in Linguistics 4:2: Proceedings of the 21st Annual Penn Linguistics Colloquium*, 201-225. Philadelphia: University of Pennsylvania.
- Nunberg, G., Sag, I and Wasow, T. Idioms. *Language* 70: 491-538.
- Pham, M. 2011. Idiomatic Root Merge in Modern Hebrew blends. In J. Schertz, A. Hogue, D. Bell, D. Brenner and S. Wray (eds.) *The Coyote Papers 18*. Tucson: University of Arizona.
- Schenk, A. 1992. The syntactic behaviour of idioms. Paper presented at the Tilburg Idioms Conference.
- Starke, M. 2009. Nanosyntax: A short primer to a new approach to language. *Nordlyd* 36, 1-6.