# Kinegrams as Complex Predicates between the Idiomatic and the Literal

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May 23, 2019

## Overview

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- 2 Semantic properties of kinegrams
- 3 Relation between the literal and the idiomatic meaning
- 4 Framework
- 5 Extended uses of idioms
- 6 Analysis
- 7 Summary and conclusion







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*den Kopf schütteln* 'shake one's head'

*die Hände geben* 'shake hands'



die Nase rümpfen 'wrinkle one's nose'



sich die Haare raufen 'tear out one's hair'

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Definition (Burger, 1976):

• Nonverbal level: Nonverbal behavior that is conventionally associated with some meaning.

#### kinegram association

- Verbal level: The kinegram describes the nonverbal behavior ("literal meaning") and expresses the conventionally associated meaning of this behavior ("idiomatic meaning").
- The kinegram can be used truthfully even if the corresponding nonverbal behavior is not performed.

- Kinegrams often involve body parts
  - (1) den Kopf schütteln 'shake one's head'
- but not always:
  - (2) a. einen Luftsprung machen an air.jump make 'jump in the air'/ 'be very happy'
    b. das Kriegsbeil begraben the tomahawk bury 'bury the hatchet'/ 'end a conflict'
- Kinegrams can be single words
  - (3) to nod 'move the head up and down'/'express approval'
- But: kinegram association is essential!

# Challenging phenomenon

"Conjunction modification" of Ernst (1981)

- (4) He bit his thirst-swollen tongue. (Ernst, 1981, p. 59)
  - a. 'He stopped himself from saying anything.' (idiomatic meaning)
  - b. AND 'He had a thrist-swollen tongue.' (literal conjunct)

Restricted to expressions with body parts (or clothing).

# Plan for today

- Semantic properties of kinegrams and their modification
- Direct-access theory of idioms
- Pretence-based extension
- Application to kinegrams

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# Kinegrams as phraseological units

• Lexical material is fixed.

- (5) a. Sie schüttelten die Hände. they shook the hands 'They were shaking hands.'
  - b. #Sie hielten die Hände und schwenkten sie hoch und runter.

'They were holding hands and waving them up and down.'

- Other descriptions of the same action don't have the kinegram association.
  - (6) a. einen Luftsprung machen
    - an air.jump make 'be happy'
    - b. einen Sprung machen
      - a jump make
    - c. in die Luft hüpfen
      - in the air hop

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Lexical fixedness: Unique components

Sometimes unique components:

- (7) a. jm die <u>Hammelbeine</u> langziehen s.o.DAT the wether.legs long.tear 'give s.o. a good telling off'
  - b. die Nase <u>rümpfen</u> the nose wrinkle 'wrinkle one's nose'

Literal kinegrams are also phraseological units

Lexical fixedness even without idiomatic meaning (collocations):

(8) a. jn auf die Nase stupsen s.o.ACC on the nose nudge 'nudge s.o. on their nose', 'give s.o. a bob on their nose' b. ??jn auf die Stirn stupsen s.o.ACC on the front nudge
c. ??jm auf die Nase tippen s.o.DAT on the nose tap

# Lexical gaps

Not all conventionalized gestures have a corresponding kinegram:



# Decomposability

An idiom is decomposable if and only if an idiomatic reading of parts of the idiom is accessible for some semantic operation (Nunberg et al., 1994). For example: *internal modification* (Ernst, 1981)

- (9) spill the beans 'keep a secret'Alex spilled the well-kept beans. (decomposable)
- (10) kick the bucket 'die'/'stop living' # Alex kicked the peaceful/ long/ ... bucket. (non-decomposable)

# Kinegrams and decomposability

Often non-decomposable:

(11) a. in die Knie gehen in the knees go 'be defeated/ admit one's defeat'
b. #Alex ging in die schmachvollen Knie. 'Alex admitted his shameful defeat'

Example of a decomposable kinegram (Ziem & Staffeldt, 2011):

- (12) a. jm. auf die Finger schauen s.o.DAT on the fingers look 'keep an eye on s.o.'s activities'
  - Reedereien auf die grünen Finger geschaut shipping.companies on the green fingers looked 'keeping an eye on the "green" (environmental) activities of shipping companies' (www)

## Literal and non-literal meaning

- The literal action is executed, instantiating the idiomatic meaning.
  - (13) "Was sind das für komische Zeichen?", fragte er. "Das weiß ich auch nicht"
    "What are these strangs signs?, he asked. "I don't know eiher"'

Fenoglio schüttelte energischden Kopf.Fenoglio shookenergetically the head

'F. denied energetically by shaking his head energetically.'

• ... and both levels can be modified separately (Burger, 1976):

(14) Sie schüttelte leise den Kopf über seine Schüchternheit. she shook softly the head about his shyness 'She shook her head softely and was surprised about his shyness.'

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# Literal and non-literal meaning

- The literal action is not executable:
  - Beim ersten Treffen hat man Schmetterlinge im at.the first date has one butterflies in.the Bauch und feuchte Hände. stommach and wet hands
     'You are anxious and have wet hands at the first date.'
- ... or not executed:
  - Wilson hörte zu und musste innerlich den Kopf schütteln.
     Wilson listened and had-to inwardly the head shake
     'W. listened and had to shake his head inwardly.'
  - (17) "Es wird ein großes Reich zerstört", sagt das Orakel. Krösus reibt sich die Hände, geht in die Schlacht und verliert.
    "A great empire will be destroyed," says the oracle. Croesus is rubbing his hands, enters the battle and looses.'

# Modification (Ernst, 1981)

- (18) The project bore satisfying fruit. (internal)
  - a. literal: ---
  - b. idiomatic: The project gave satisfying results.
- (19) When all our circuits blew out, the GE technician came over and lent us an electronic helping hand. (external)
  - a. literal: ---
  - b. idiomatic: ... the GE technician helped us in the electronic domain
- (20) The \$6,000,000 man came over and lent us an electronic helping hand. (conjunction)
  - a. literal: The \$6,000,000 man has an electronic hand.
  - b. idiomatic: The \$6,000,000 man helped us.

# Conjunction modification

Common with kinegrams, but rare/ non existing with other idioms (Ernst, 1981)

- (21) He bit his thirst-swollen tongue.
  - a. literal: He has a thirst-swollen tongue.
  - b. idiomatic: He remained quiet.

# Factuality of the modifier

The modifier in conjunction modification of kinegrams is always with respect to the current world:

- (22) Alex rümpft die gereizte Nase.
   Alex wrinkles the irritated nose
   'Alex is wrinkling his/her nose and his/her nose is irritated.'
- (23) Alex hat Schmetterlinge im etwas zu gut gefütterten Alex has butterflies in.the slightly too well fed Bauch.

stomach

'Alex is anxious and has a slightly too well-fed stomach.'

# Factuality of the modifier

Therefore, no conjunction modification with a non-existing body part:

(24) Als es hart auf hart kam, hat Chris dann aber doch den (#buschigen) Schwanz eingezogen.
'As it got serious, however, Chris climbed down.'
lit.: 'Chris put the (bushy) tail between the legs.'

Factuality is not generally required for conjunction-like modification (Bargmann et al., t.a.):

(25) Venezuela's Friend of the Working Class, Hugo Cháves, kicked the golden bucket with an estimated net worth of 2 billion dollars.

# Modification

- Internal modification is a test for decomposability
- External modification is attested with both decomposable and non-decomposable idioms
- Conjunction modification is rare with idioms except for body-part phraseologisms, where it is very common. (examples in Ernst (1981) are exclusively with body part expressions – including clothing)
- Conjunction modification with body part expressions always refers to the current world.

# Kinegrams as a special class of phraseologism

- often non-decomposable
- transparent, if one is familiar with the conventional interpretation of the literally described behavior (Kinegram association)
- literal and idiomatic reading can hold simultaneously, but need not
- conjunction modification is common, where the literal conjunct needs to hold, even if the literal action is not performed

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# Meaning components of kinegrams

- literal meaning of the overall expression
- literal meaning of parts of the overall expression
- idiomatic meaning of the overall expression
- for non-decomposable kinegrams: no identifiable idiomatic meaning of parts of the overall expression
- kinegram association

# Types of meaning

Grice (1975), Karttunen & Peters (1979), Potts (2005), Tonhauser et al. (2013)

- Asserted/entailed content ( $\vDash$ ): what is actually being claimed.
- Presupposed content (▷): assumptions that need to be fulfilled for the asserted content to be interpretable
- Conventional implicature (→): additional information conveyed, usually as side remarks
- Conversational implicature (→): additional inferences that are drawn based on the context and on what is being said.

# Types of meaning

		projects out	projects out	projects out
	at issue?	of negation/	of believe-	of embedded
		y/n-question?	contexts?	speech?
entailment	yes	no	no	no
presupposition	no	possibly	possibly	no
conventional	no	obligatorily	obligatorily	no
implicature				

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# The status of the meaning components of kinegrams

- idiomatic meaning (asserted/entailed)
- parts of the literal meaning (presupposed)
- kinegram association (conventional implicature)

# Idiomatic meaning: at issue?

Speaker commitment to the idiomatic meaning: Literal reading not available:

 (26) Alex hat die Ohren gespitzt.
 Alex has the ears pricked
 # Tatsächlich hat sie gar nicht zugehört. In fact has she not at all listened

Literal meaning available:

(27) Alex hat Chris die Hand gegeben.
 Alex has Chris the hand given.
 # Sie hat ihn aber nicht begrüßt.
 She has him but not greeted
 'Alex gave Chris the hand. But she didn't greet him.'

"#" if the idiomatic reading is assumed for the first sentence.

Idiomatic meaning: Negation/question?

The idiomatic meaning does not follow under negation or in question. Ergo, the idiomatic meaning is asserted!

Kinegram association: at issue?

- (29) Alex hat die Ohren gespitzt, #aber wer die Ohren spitzt, hört ja nicht unbedingt zu.
  'Alex pricked her ears. But who pricks their ears, doesn't necessarily listen.'
- (30) Alex hat Chris die Hand gegeben, #aber die Hand geben und jemanden grüßen sind ja zweierlei Dinge.
  'Alex and Chris shook hands, but shaking hands and greeting are, of course, different things.'

Using the idiomatic meaning, the speaker commits to the kinegram association.

Kinegram association: Negation/question?

- (31) a. Hat Alex die Ohren gespitzt? 'Did Alex prick her ears?'
  - b. Alex hat Chris nicht die Hand gegeben.'Alex didn't shake Chris' hand.'

Using the idiomatic meaning, the speaker accepts the kinegram association independently of whether or not there is a negation or a question.

Kinegram association: Belief contexts?

- (32) a. Robin glaubt, dass Alex die Ohren gespitzt hat. 'Robin thinks that Alex pricked her ears.'
  - b. Robin glaubt, dass Alex Chris die Hand gegeben hat.'Robin thinks that Alex shook Chris' hand.'

Using the idiomatic meaning, the speaker accepts the conventional association independently of whether or not the kinegram is used in a belief context

Ergo: The conventional association between the behavior and the idiomatic meaning is a conventional implicature.

# Partial literal meaning: at issue?

To see what type of meaning the partial literal meaning is, we need a sentence where we use the idiomatic meaning but see the literal meaning at the same time, i.e., a sentence with conjunction modification.

- (33) Alex hat die großen Ohren gespitzt.
  Alex has the big ears pricked
  a. idiomatic meaning: 'Alex pricked her ears.'
  b. literal conjunct: '... and Alex has big ears'
- (34) ... # Das stimmt nicht, Alex hat keine großen Ohren!'This is not correct, Alex doesn't have big ears!'

The literal conjunct is not at issue content.

Partial literal meaning: Negation/question?

- (35) Hat Alex die großen Ohren gespitzt?'Did Alex prick her big ears?'
- (36) Alex hat Chris nicht die fettige Hand gegeben.'Alex didn't give Chris her greasy hand.'
  - a. 'Alex didn't greet Chris'
  - b. '... and Alex' hand is greasy.'

Typically, the truth of the literal conjunct is not part of what is questioned and not in the scope of negation.
Partial literal meaning: Belief contexts?

- (37) Robin glaubt, dass Alex die großen Ohren gespitzt hat
   Dabei hat Alex eher kleine Ohren.
  'Robin believes that Alex pricked her big ears'-But Alex has rather small ears.'
- (38) Robin glaubt, dass Alex Chris die fettige Hand gegeben hat.
   Dabei hat Alex immer saubere Hände.
  'Robin believes that Alex gave Chris her greasy hand.
  —But Alex' hands are always clean.'

Using the idiomatic meaning, the speaker need not commit to the literal conjunct.

Ergo: The literal conjunct is a presupposition.

# Status of the literal conjunct surprising?

- Body parts have uniqueness CI: Whoever has a nose, has exactly one nose. (Löbner, 2011; Am-David, 2016)
- Existence presupposition of definite NPs: the N' presupposes that an entity with property N' exists.
- (39) a. Alex trägt den linken Arm in einer Schlinge.
   Alex wears the left arm in a sling 'Alex is wearing her left arm in a sling.'
  - b. Trägt Alex den linken Arm in einer Schlinge?'Is Alex wearing her left arm in a sling?'
  - c. Robin glaubt, dass Alex den linken Arm in einer Schlinge trägt, dabei hat Alex den linken Arm bei einem Unfall verloren.

'Robin believes that Alex is wearing her left arm in a sling, but, in reality, Alex has lost her left arm in an accident.'

Ergo: Body-part NP behaves fully like a literal combination!

## Summary: Meaning components of kinegrams

- The idiomatic meaning is asserted.
- The kinegram association is a CI.
- The literal conjunct is a presupposition and behaves fully like in its literal reading.

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#### Framework

- Head-driven Phrase Structure Grammar (HPSG): Pollard & Sag (1994)
- Techniques of underspecified semantics: Bos (1996); Copestake et al. (2000); Egg (1998, 2010); Pinkal (1996); ...
- Lexical Resource Semantics (LRS): Richter & Sailer (2004)
- General idea: Words and phrases constrain the semantic representation of their utterance (specifying what must occur in the representation and where)
- Proposal for integration of multi-dimensional semantics:
  - Bonami & Godard (2007): Cls for evaluative adverbs
  - ► Hasegawa & Koenig (2011): Structured meaning for focus
  - Plan: Use a standard HPSG-mechanism of perlocation and retrieval for projective meaning

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## Lexical Resource Semantics: Basics

Semantic representations in LRS

- Lexical signs exhaustively contribute all meaning components of utterances
- Signs contribute constraints on the relationships between (pieces of) their semantic contributions
- Semantic constraints denote semantic representations

## Our semantic metalanguage

Use some standard semantic representation language.

Embed this in a semantic metalanguage:

- ordinary expressions denote ordinary expressions
- metavariables: *A*, *B*, ... denote arbitrary expressions
- for each metavariable A and each metalanguage expressions
   φ<sub>1</sub>,..., φ<sub>n</sub>:
   A[φ<sub>1</sub>,..., φ<sub>n</sub>] is an expression that contains at least the interpretation
   of φ<sub>1</sub>, ..., and φ<sub>n</sub> as subexpressions.
- (40) Alex drew a red nose.
  Exist x((red(x)&nose(x))&draw(alex, x))
  - a. Alex: PARTS alex
  - b. nose: PARTS nose(x)
  - c. red: PARTS (red(x)&A[x])
  - d. a: PARTS  $\exists x (B[x] \& C[x])$
  - e. drew: PARTS draw(alex, x)

#### Semantic combinatorics

- In each phrase: The constraints of the daughters are collected.
- Utterance: The overall semantics of the utterance (EX(TERNAL-)CONT(ENT)) contains all and only the elements mentioned in the constraints of its constituents.
- (41) Alex drew a red nose. PARTS  $D[nose(x), (red(x)\&A[x]), \exists x(B[x]\&C[x]), draw(alex, x)]$

(42) 
$$A = \operatorname{nose}(x)$$
$$B = (\operatorname{red}(x) \& \operatorname{nose}(x))$$
$$C = \operatorname{draw}(\operatorname{alex}, x)$$
$$D = \exists x(\dots \& \dots)$$

(43) EXCONT  $\exists x ((\operatorname{red}(x) \& \operatorname{nose}(x)) \& \operatorname{draw}(\operatorname{alex}, x))$ 

## Idioms in LRS

- Fully lexical analysis for all syntactically regular idâioms
- For decomposable idioms: Each idiom part makes an identifiable contribution

(44) a. 
$$pull: \exists e(A[use^{id}(e, y, x]))$$
  
b.  $strings: \exists x(B[connections^{idid}(x) \land B'[x]))$ 

- For non-decomposable idioms:
  - the idiomatic meaning is contributed by the head
  - the non-head has an empty meaning (Kay et al., ms.) or a redundant meaning (Bargmann & Sailer, 2018)

(45) a. kick: 
$$\exists e(A[\mathbf{die}^{id}(e,x)])$$

b. the: 
$$\exists e(A)$$

c. 
$$bucket: die(e, x)$$

## Multi-dimensional semantics

- Regular semantic combinatorics (asserted content)
- Projective meaning (presuppositions, conventional implicatures): percolates until it is integrated into the EXCONT.
- Discourse (conversational implicatures)



# LRS Encoding of presuppositions and CIs

- Sailer & Am-David (2016): Encoding closer to Potts (2005) than Bonami & Godard (2007), but allowing for intermediate retrieval of Cls.
- List-valued attributes **PRESUP**(**POSITION**) and **CI**.
- Elements of **PRESUP** and **CI** also occur on **PARTS**
- Percolation and retrieval for PRESUP: PRESUP elements percolate to the mother unless retrieved at a clause, in which case they are in the immediate scope of an appropriate operator.
- Percolation and retrieval for CI: CI elements percolate to the mother unless retrieved at a clause, in which case they are in the immediate scope of some speech act operator.

Body part nouns have a uniqueness CI:

(46) nose:

- a. core semantics (functional noun): nose(x, y)
- b. uniqueness CI, BPU:

Typically, whoever has a nose, has exactly one nose. **Gen**  $\forall y (\exists x (\mathbf{nose}(x, y)) \rightarrow \exists ! x (\mathbf{nose}(x, y)))$ 

## Definiteness

The definite article: existence presupposition ([E], [E']) and uniqueness CI ([D]) (Am-David, 2016; Sailer & Am-David, 2016).

(47) the N:

- a. asserted content: x
- b. existence presupposition,  $\mathbb{E}_{x}$ :  $\exists x(`N' \land B[x])$
- c. definite uniqueness CI, Def: If there is an element satisfying the description N in a relevant situation, then there a unique such element  $\exists x('N') \rightarrow \exists ! x('N')$

#### (48) the (red) nose

- a. CI BPU: typically, who has a nose, has exactly one nose
- b. Presup Ex: there exists a (red) nose
- c. Cl Def: if there is a (red) nose in the situation, there is a unique (red) nose

Chris believes that Alex painted the red nose

(49) Alex painted the red nose

- a. asserted: **paint**(**alex**, *x*)
- b. presupposed:  $\exists x ((nose(x) \land red(x))) \land B[x])$
- c. CI: BPU, Def
- (50) Chris believes that Alex painted the red nose.
  - a. asserted:

 $believe(chris, \land \exists x((nose(x) \land red(x)) \land paint(alex, x)))$ 

b. CI: BPU, Def

## Framework: Summary

- Standard semantic represenations
- Percolation mechanism for projective meaning:
  - ▶ parallel to Cooper store mechanism for quantifiers (Cooper, 1983)
  - distinct for presuppositions and CIs
- In between LF-theories (Heim & Kratzer, 1998; Potts, 2005; Liu, 2012) and Discoure Respresenation Theory (Kamp & Reyle, 1993; Kamp et al., 2005)
- Convenient for our data, but other mechanisms might work, too.

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#### Idiom extensions

- An idiom extension builds on the literal meaning of an idiom to provide a figurative continuation for the idiomatic meaning of the idiom.
- Example (Egan, 2008, 392):

(51) If you let this cat out of the bag, a lot of people are going to get scratched.

- Data, typically ignored in formal phraseology.
- Explicitly addressed in Egan (2008) as pretence
- Here: short presentation of the model-theoretic interpretation of pretence in Findlay et al. (2018, 2019)

Idiom extensions: Mapping theories

- Egan (2008): Idioms involve a 'pretence':
   If someone ( idiomatic meaning ), pretend they ( literal meaning )
  - (52) If you let this cat out of the bag, a lot of people are going to get scratched.Pretence: If someone reveals a secret, pretend there's some salient cat that they've let out of the bag.
- Four-part analogy:
  - (53) letting the cat out of the bag :: reveal a secret getting scratched by the cat :: ??

Hybrid idiom theory (Findlay et al., 2019)

Situation-dependent interpretation:

(55) Alex pulled strings.  $[f : \exists x (connections^{id}(x) \land use^{id}alex, x)]$ 

Lexical encoding:

(56) a. pull: 
$$use^{id}(y,x)$$

b. *strings*: 
$$\exists x (B[strings^{id}(x)] : B'[x])$$

c. Pretense mapping:

$$\begin{array}{l} \sqcap \mathsf{pull-strings} \\ = \lambda f \lambda n \forall x y ([f : \mathsf{connections}^{id}(x) \land \mathsf{use}^{id}(y, x)] \\ \Leftrightarrow [n : \mathsf{strings}(x) \land \mathsf{pull}(y, x]) \end{array}$$

## Lexical specification of the idiom

- Relating the form to the idiomatic meaning.
- Pretence statement: relating idiomatic meaning and literal meaning
- Relatively analogous situations, s<sub>Π</sub>s': exceptions from a bijection are possible iff provided through Π.
- (57) a. pull strings:  $\lambda x.[f : \exists y (\text{connections}(y) \land \text{exploit}(x, y)]$ b.  $\Pi_{\text{pull-strings}} = \lambda f \lambda n. \forall xy ([f : \text{connections}(y) \land \text{use}(x, y)]$  $\leftrightarrow [n : \text{strings}(y) \land \text{pull}(x, y))]$

## Idioms make a nonfactual mood available

- Roberts (1989): Modal subordination
  - is possible if there is a marker of nonfactual mood (subjunctive, modals, conditionals)
  - puts a continuation in the scope of such operator.
- Idioms are such markers!
- The pretence statement is an accessibility relation linking the factual situation to nonfactual situations.
- Extended uses are interpreted with respect to such an accessible nonfactual situation.
- (58) Alex pulled strings, but they were frayed.  $[s : \exists x (connection(x) \land use(alex, x)] \land FIG_{\Pi}([s : frayed(x)]))$

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  - (i) Minimal factual and nonfactual situations  $f_m$  and  $n_m$  in min( $\Pi$ ).
- (ii) frayed holds of an object from  $n_m$  in an extended non-fact. sit.  $n_e$ .
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As  $f_e$  is a sub-situation of f, the analogy restricts the factual situation.

# Applicable to modified kinegrams?

Similarity to the kinegram data:

- Idiomatic reading is asserted.
- The literal reading must be accessible
- Additional modifier is non-restrictive:
  - (61) Alex hat die übrigens recht großen Ohren gespitzt. Alex has the by.the.way quite big ears pricked 'Alex pricked the ears, which are quite big by the way.'
- Non-restr. modification is a discourse phenomenon (Arnold, 2007)
- Basic idea:
  - (62) a. Alex spitzt die großen Ohren. Alex pricks the big ears 'Alex listens carefully and Alex has big ears.'
    b. [f : listen<sup>id</sup>(alex)∧FIG<sub>□</sub>prick-ears<sup>(big(x))</sup>]

# Applicable to modified kinegrams?

but for kinegrams:

- The literal reading may hold in the factual world.
- The literal conjunct is not asserted but presupposed.
- Pretence mapping is not a pretence, but the kinegram association

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## Analysis of kinegrams



- Verb (syntactic head):
  - contributes the idiomatic meaning
  - contributes kinegram association as a CI
  - ensures co-occurrence with particular body part lexeme
- Body part noun: ordinary lexical entry for unique noun
- Definite article: ordinary lexical entry

# Kinegrams: Noun and article

Ordinary words

- (63) *die* 'the':
  - a. asserted: x
  - b. presup  $E_X$ : there is an x such that N
  - c. Cl Def: if there is an x such that N in the relevant situation, there is exactly one such x.
- (64) Ohren 'ears':
  - a. asserted: ear(x, y)
  - b. presup: -
  - c. body-part uniqueness CI BPU: Whoever has ears, has exactly one set of ears.

## Kinegram: Idiomatic verb

- Head of the expression has idiomatic lexical entry.
- It selects for the lexeme Ohr 'ear',
- but the direct object is not a semantic argument of the head!
- It contributes the kinegram association as a CI.
- (65) *spitzen* 'prick' (idiomatic)
  - a. selection: direct object, x, has lexical id *ear* and is possessed by y.
  - b. asserted: **listen**<sup>*id*</sup>(y)
  - c. kinegram association CI KA:  $\exists f \exists n(\Pi_{\mathbf{pe}}(f, n))$
- (66) KA (kinegram association): Typically, pricking one's ears is equivalent to listening carefully.  $\Pi_{\mathbf{pe}} = \lambda f \lambda n \forall y ([f : \mathbf{listen}^{id}(y)] \Leftrightarrow [n : \exists x (\mathbf{ear}(x, y) \land \mathbf{prick}(x, y))])$

## Alex spitzt die Ohren

(67) Alex spitzt die Ohren Alex pricks the ears 'Alex listens carefully.'

- a. asserted:  $[f : listen^{id}(alex)]$
- b. Pres Ex:  $\exists x (ear(x, alex))$
- c. Cl  $\underline{\mathsf{Def}}$ :  $[s : \exists x(\mathsf{ear}(x, \mathsf{alex})) \rightarrow \exists ! x(\mathsf{ear}(x, \mathsf{alex}))]$
- d. CI BPU: Gen  $s \forall y([s : \exists x(ear(x, y)) \rightarrow \exists !x(ear(x, y)))])$
- The semantics of *die Ohren* "disappears".
- It only features as a default selection requirement that whoever pricks their ears should have ears.
- Subformulæ Ex and Def are unified with parts of BPU

# Conjunction modification

- (68) Alex spitzt die großen Ohren. **listen**<sup>*id*</sup>(alex) $\land$ **FIG**<sub>П**pe**</sub>(**big**(*x*)) Alex pricks the big ears 'Alex pricks her/his big ears.'
- (69) Non-restrictive adjective:  $gro\beta$ : **big**(x)
  - Non-factual situation n such that
  - Minimal  $\Pi$  situations  $f_m \leq f$  and  $n_m \leq n$  such that  $[f_m : listen^{id}(alex)]$  and  $[n_m : \exists x(ear(x, alex) \land prick(alex, x))]$
  - Expanded non-fact. situation  $n_e$ ,  $n_m \le n_e \le n$  such that:  $[n_e : \exists x (ear(x, alex) \land prick(alex, x)) \land big(x)]$
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## Explaining the difference to extended uses of idioms

- The literal reading may hold in the factual world: Nothing forbids *f* = *n*, but only the literal or the idiomatic reading is asserted.
- The literal conjunct is not asserted but presupposed: The literal conjunct is introduced to make the sentence interpretable, i.e., it is a presupposition
- Pretence is not a pretence but the kinegram association: In this encoding, the kinegram association is treated as a pretence.

- Body part NP is treated just as in the literal reading.
- In the fully idomatic reading, the existence presupposition is "dissappears" inside the uniqueness implicature.
- Conjunction modification can be analyzed as idiom extension
- Differences follow from the syntactic structure and the compatibility of the literal and the idiomatic meaning.

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## Summary

- Kinegrams are complex predicates, though the body-part expression's semantics may not be semantically visible in non-modified cases.
- Applying methods of formal semantics and pragmatics to determine the relation between literal and idiomatic reading in kinegrams
- Lexical analysis: Each word makes an important contribution to the explanation of the expression's behavior.
- Body-part modifiers in kinegrams are always non-restrictive, which is a consequence of the uniqueness of body parts.
- This allows for an analysis in terms of extended idiom uses à la Findlay et al. (2018, 2019).

#### Perspectives

- Kinegram association as a basic mechanism for the creation of idioms
- and as a clear case for motivating a pretence-style relation between the literal and the idiomatic meaning.
- Decomposability can be read off from the pretence statement.



#### Open questions

- To which types of idioms can we extend this analysis?
- Applicable to conjunction modification with non-body parts (but still with definite NPs)?

(70) ins Gras beißen 'bite into the gras'/ 'die'
Der Tag ist noch jung, die Sonne scheint und ein Bürger hat ins frisch gemähte Gras gebissen ...
'The day is still young, the sun is shining and a citizen has bitten into the freshly mowed gras.'
'..., and the gras is freshly mowed and a citizen has died.'
(www)

• ... to the cases discussed in Bargmann et al. (t.a.)?

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# Thank you for your attention



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