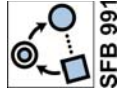


The nominal onion and how to make your way from within to the surface

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0. Basic assumptions (2)

- **NP-internal operations**
of argument saturation, modification, determination, and quantification are organized in a logical way that results in functional layers within the NP.
- NP-internal operations
may or may not become overt (marked) in the form of the NP
- There is no such thing as unspecificity with respect to conceptual type:
 - Every noun, in a given word sense, is of a specific conceptual type.
 - Every NP, when interpreted, is assigned a specific conceptual type.This holds independently of whether or not certain determinations are grammatically distinguished, i.e. explicit or not.

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0. Basic assumptions

- **Lexical noun meanings**
are of **conceptual types** that differ with respect to
 - countability (count vs. mass)
 - relationality (relational vs. non-relational)
 - inherent uniqueness
- **NP meanings**
are of the same different conceptual types.
The conceptual type of an NP may differ from the type of its lexical head.
- **Determination**
primarily determines the conceptual type of a nominal.
It may, but need not, add semantic content.

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0. Basic assumptions

Scope of the approach:

NPs with lexical N, proper names, and definite pronouns in referential (argument) use.

Not covered:

- predicative nominals
- generic nominals
- features and properties of the NP that relate it to the sentential context or to information structure, such as
 - case
 - scope
 - topicality

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1. Seven functional layers

- **NUCLEUS** noun meaning
- **RELATION** possession, arguments
- **QUALITY** restrictive attributes: adjectives, relative clauses, etc.
- **UNIT** plural, numeral classification
- **QUANTITY** explicit quantity specification
- **ORDER** ordinals, superlatives, *last, next, favorite, former* etc.
- **DEFINITENESS** indefinite, definite, demonstrative
- **QUANTIFICATION** partitive, quantification proper (*every* etc.)

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2. Three basic conceptual features

- [R] Relationality**
 [+R] relational nominals: one or more relational arguments
 [-R] non-relational nominals: no relational arguments
- [C],[PI] Countability**
 [+C] [-PI] singular countable nominals
 [-C] [-PI] mass nominals
 [-C] [+PI] plural countable nominals
criterion of summativity (\approx *divisibility plus cumulativity*)
 [-C]: nom(x) iff for all parts y of some proper partition of x: nom(y)
- [U] Uniqueness**
 [+U] inherently unique nominals
 [-U] inherently non-unique nominals

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2. Three basic conceptual features (2)

	[+C] countable		[-C] non-countable
	[-U] non-unique	[+U] unique	
[-R] non-relational	sortal girl book band	individual US_president Joe we	sortal mass salt furniture tables
[+R] relational	relational sister property	functional mother head price	relational mass skin baggage bones

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3. The layers

3-N The layer NOUN MEANING

- Lexical noun meaning
- Semantic mechanisms**
- **Shifts**
Metonymy, metaphor, mass count shifts, various coercions
Some shifts affect the features [R], [C], [PI], and [U]
 - **Compounding** (nonlexicalized combinations)
Teenie|party *Präsidenten|wahl*
 - **Co-nominal ("relational") adjectives** (nonlexicalized) combinations
nuclear winter *parental care* *presidential visit* *German emperor*

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3-R The layer RELATION and the feature [R]

- Non-relationality constraint on referential NPs [Löbner 2011]:
Full NPs are [-R]/non-relational.
 → [+R]/Relational nominals require saturation of the possessor argument.
- Possessive specification requires/coerces [+R].
 → [-R]/Non-relational nominals require relationalization for possessive use.
- Feature effect: Addition of a possessor argument nominal yields a complex with the R feature value of the possessor:

(1) [+R] sister [of] [-R] Joe : [-R] sister of Joe
 [+R] sister [of] [+R] mother [of] : [+R] sister of mother [of ...]
 = [+R] aunt [of ...]

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3-R The layer RELATION and the feature [R] (2)

From [-R] to [+R]: Relationalization

explicit: Koyukon (Athabaskan, Thompson 1996)

(2) *leek* [-R] *leeg-e'* [+R] *ne-leeg-e'* [-R] *alienable possession*
 dog dog-REL 2SG-dog-REL
 'dog' 'dog of' 'your_{SG} dog'

(3) *kkaa'* [+R] *ne-kkaa'* [-R] *inalienable possession*
 foot 2SG-foot
 'foot of' 'your_{SG} foot'

implicit: English

(4) (*your* + foot_{+R}) [-R] (*your* + dog_{-R} → {+R}) [-R]

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3-R The layer RELATION and the feature [R] (3)

From [+R] to [-R] (1): existential/sortal possessor

explicit: Koyukon

(5) *kkaa'* [+R] *k'e-kkaa'* [-R]
 foot DEREL-foot
 'foot of' 'a/the foot [of an animal]'

implicit: English

(6) (*a/the* foot_{+R}) [-R]

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3-R The layer RELATION and the feature [R] (4)

From [+R] to [-R] (2): non-relational possessor

(7) Hungarian (Uralic)

könyv-em [-R]
 book-1SGPOSS
 'book of mine'

English: non-relational possessor + definite (for referential NPs)

(8) *my* sister [-R]{+U}

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3-R The layer RELATION and the feature [R] (5)

From [+R] to [-R] (3): implicit contextual possessor

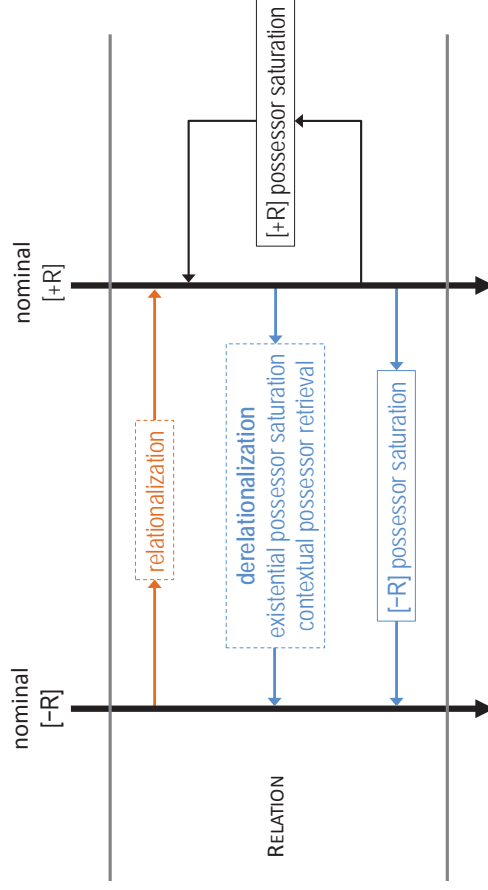
- (9) Associative anaphora
I wanted to order a book, but I had forgotten **the title**.
- [+R] title is shifted to [-R] for non-relational use, by *construing the possessor from the context*: it is the referent of the antecedent a book.

3-R The layer RELATION and the feature [R] (6)

From [+R] to [+R]: possessive chaining

- (10) sister [+R] of mother [+R] total: [+R]
sister [+R] of mother [+R] of Joe [-R] total: [-R]

3-R The layer RELATION and the feature [R] (7)



3-Qual The layer QUALITY

Semantic mechanisms

- **Property adjectives**
big car red bicycle
- **Restrictive relative clauses**
the coffee they drank
- **Other restrictive attributes**
the coffee on the floor

3-UQ The layers UNIT and QUANTITY and the feature [C]

Additional feature [PI] required for plural of count nominals. [+PI] entails [-C].

Three cases	English	Mandarin
singular	[+C][-PI] house choir	fángzi NP 'house'
plural	[-C][+PI] houses people	fángzi NP 'houses'
mass	[-C] water furniture	shuǐ N/NP 'water'

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3-UQ The layers UNIT and QUANTITY and the feature [C] (2)

Mandarin

- Count noun nuclei like fángzi 'house' are [+C]. Only count nuclei can be combined with **count classifiers**, e.g. shape and sort classifiers.
- Mass noun nuclei like shuǐ 'water' are [-C]. They take only **mass classifiers**, e.g. container and measure classifiers.
- With pluralization, count nominals change to [-C], and can take mass classifiers, too.

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3-UQ The layers UNIT and QUANTITY and the feature [C] (3)

From [+C] to [-C][+PI] / From [-C] to [-C]: sum formation Σ

The sum formation forms a concept that refers to sums of what the input concept refers to.

- With [+C] input, sum formation yields a [-C][+PI] output.
- With [-C] input, sum formation does not change the features [C] or [PI]; cf. "cumulativity" of mass nominals.

(10) Σ fángzi = fángzi[-C][+PI] 'houses'
 Σ shuǐ = shuǐ [-C] 'water'

Σ water = water
 Σ student = students
 $\Sigma \Sigma$ student = Σ students = students

(11) The students [= $\Sigma \Sigma$ student] gathered in their classrooms [= Σ classroom].

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3-UQ The layers UNIT and QUANTITY and the feature [C] (4)

From [+C] to [-C][-PI]: count classifiers

In absence of a grammatical singular/plural distinction, count classifiers such as generic \uparrow gè function as singularizers, providing units of counting and/or reference.

(12) Mandarin

gè fángzi
 CCLS house
 'house \acute{s} '
 CCLS = count classifier

English

For count nouns with nonzero plural marking, this type of classification is N-inherent.

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3-UQ The layers UNIT and QUANTITY and the feature [C] (5)

From [-C] to [+C][-PI]: mass classifiers

Mass classifiers are only available for [-C] nominals (i.e. plural and mass).

- (13) *kuài dànǎo*
MCLS cake
'piece of cake'

MCLS = MASS classifier

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3-UQ The layers UNIT and QUANTITY and the feature [C] (6)

QUANTITY (1): Cardinal numerals

- require a [+C][-PI] input
- add a feature [+Q] for explicit quantity specification (a prerequisite for partitives and quantification proper)

- (13) *san gè fángzi*
three CCLS house
'three houses'
- san kuài dànǎo*
three MCLS cake
'three pieces of cake'
- három ház*
three house.sg [+C][-PI]
(Hungarian)

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3-UQ The layers UNIT and QUANTITY and the feature [C] (7)

QUANTITY (2): Vague quantity specification

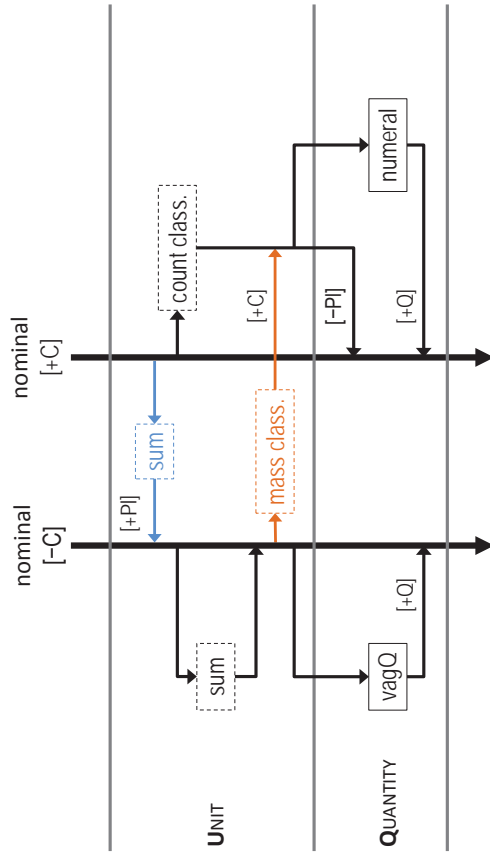
e.g. 'much/many', 'little/few', 'more', 'several', etc.

- require [-C] input (either mass or plural)
- add a feature [+Q] for explicit quantity specification (a prerequisite for partitives and quantification proper)

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3-UQ The layers UNIT and QUANTITY and the feature [C] (8)



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3-D The layers DEFINITENESS and QUANTIFICATION and [±U] (4)

From [+U] to [+U]: semantic definiteness

Semantic definites refer uniquely prior to being marked as definite; the operand of definite determination is inherently unique, i.e. [+U].

(19) the [US president]_[+U]

(20) [Barack Obama]_[+U]

(21) Mandarin

tàiyang_[+U]

sun

'the sun'

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3-D The layers DEFINITENESS and QUANTIFICATION and [±U] (5)

From [-U] to [+U] (1): demonstratives

(15) *this* dog_[-U] [+U]

these dogs_[-U] [+U]

this US_president_{[+U]→[-U]} [+U]

Demonstratives require/coerce [-U] on their operands, to return [+U].

(16) Mandarin

nà gè fángzi

DEM CCLS house

'that house'

nà xiē fángzi

DEM MCLS 'some' house

'those houses'

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3-D The layers DEFINITENESS and QUANTIFICATION and [±U] (6)

From [-U] to [+U] (2): pragmatic definiteness

Pragmatic definites refer uniquely by drawing on additional, non-semantic information from the context.

(17) immediate situation use
Please, pass me *the* coffee.

(18) direct anaphora

There she read about *a man* who had been discovered after spending two-thousand years in a peat bog in the Netherlands. [...] *The man's* brow was furrowed, [...] (from Raymond Carver, *Preservation*, 2003)

'man' = 'man she read about there who had been discovered after spending two-thousand years in a peat bog in the Netherlands'

conceptually unique by virtue of the given context

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3-D The layers DEFINITENESS and QUANTIFICATION and [±U] (7)

From [±U] to [+U]: determiner possessives

In certain languages, possessor specifications are in complementary distribution with definiteness marking (Haspelmath 1999). In these languages, possessor specification with [+U] possessor leads to [+U] determination if the NP is referential:

(20) *my* friend [+U] 'the friend of mine'

(21) Italian
una/la mia amica 'a friend of mine/my friend' [female]

(22) Hungarian
egy/a barát- am 'a friend of mine/my friend'
INDEF/DEF friend 1SGPOSS

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3-D The layers DEFINITENESS and QUANTIFICATION and [±U] (8)

From [+U] to [-U] (1): partitives

Partitives refer to an indefinite [-U] subset of a definite [+U] superset.
Partitive takes [+U] nominals to [-U].

(23) Polish (Czardybon 2015)

dat- em^{PF} mu zup- y
gave- 1SG PRON.DAT.3SG soup- GEN

'I gave him [some] of the soup'
[in one reading]

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3-D The layers DEFINITENESS and QUANTIFICATION and [±U] (9)

From [+U] to [-U] (2): referential quantifiers proper

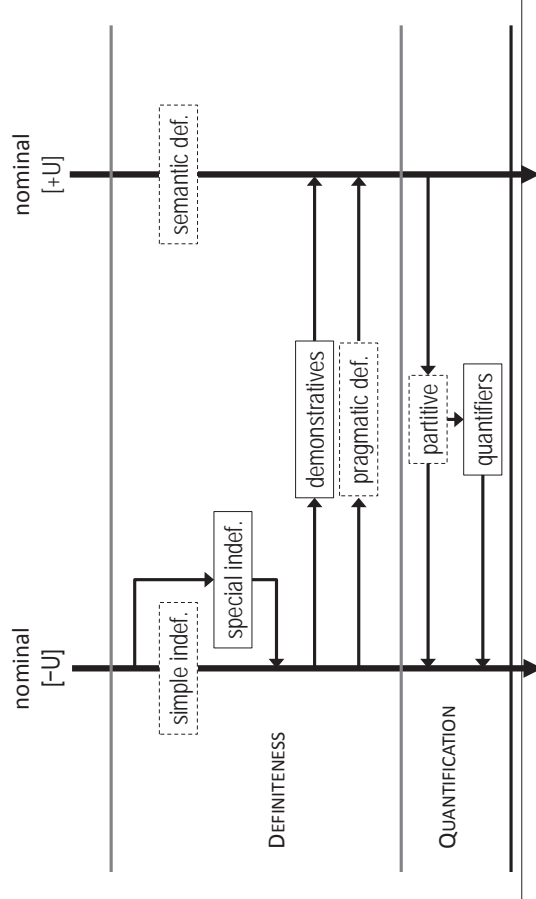
Referential nominal quantification involves definite reference to a sum of cases (= the domain of quantification). This component of referential nominal quantification can be made explicit with an equivalent partitive paraphrase. Operators of quantification are either genuine quantifiers like 'all', 'every', 'both' or explicit quantity specifications that introduce the feature [+Q].

single case	quantification	domain
mass	<i>all</i> [of] the coffee was served in paper cups	Σ coffee
singular	<i>every</i> [one of the] egg[s]	Σ egg
plural	<i>most</i> [of the] students gathered in their classrooms	Σ students

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3-D The layers DEFINITENESS and QUANTIFICATION and [±U] (10)



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4. Some results

The basic **types of determination** can be characterized in terms of the three conceptual features [±U] [±R] [±C]:

→	[+R]	relativizing
→	[-R]	possessive, derelativizing
→	[+C]	numeral classification
→	[-C]	plural, sum
→	[+U]	definite
[-U]	→	demonstrative
→	[-U]	indefinite
[+U]	→	quantificational, partitive

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4. Some results (2)

Some types of determination may occur **without morphosyntactic marking**:

	<u>without</u>	<u>with</u>
• relativization	English, Korean	Koyukon
• derelativization	English, Korean	Koyukon
• existential possessor saturation	English, Korean	Koyukon
• contextual possessor retrieval	English, Korean	Koyukon
• sum , plural	(Korean)	(English)
• count classification	English	Korean
• mass classification	(English)	English, Korean
• pragmatic or semantic definiteness	Korean	English
• simple indefiniteness	Korean	English
• partitive (?)	Korean (?)	English

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4. Some results (3)

Other types of determination necessarily come **with morphosyntactic marking**, they all contribute additional semantic content:

operation	additional semantic content
• quality level operations	restrictive modification
• possessive determination	possessor specification
• quantity specification (vague or numeral)	value on quantity scale
• order level operations	rank in an ordering (diverse)
• special indefinite	deictic differentiation
• demonstrative	
• quantification proper	value on a portion scale

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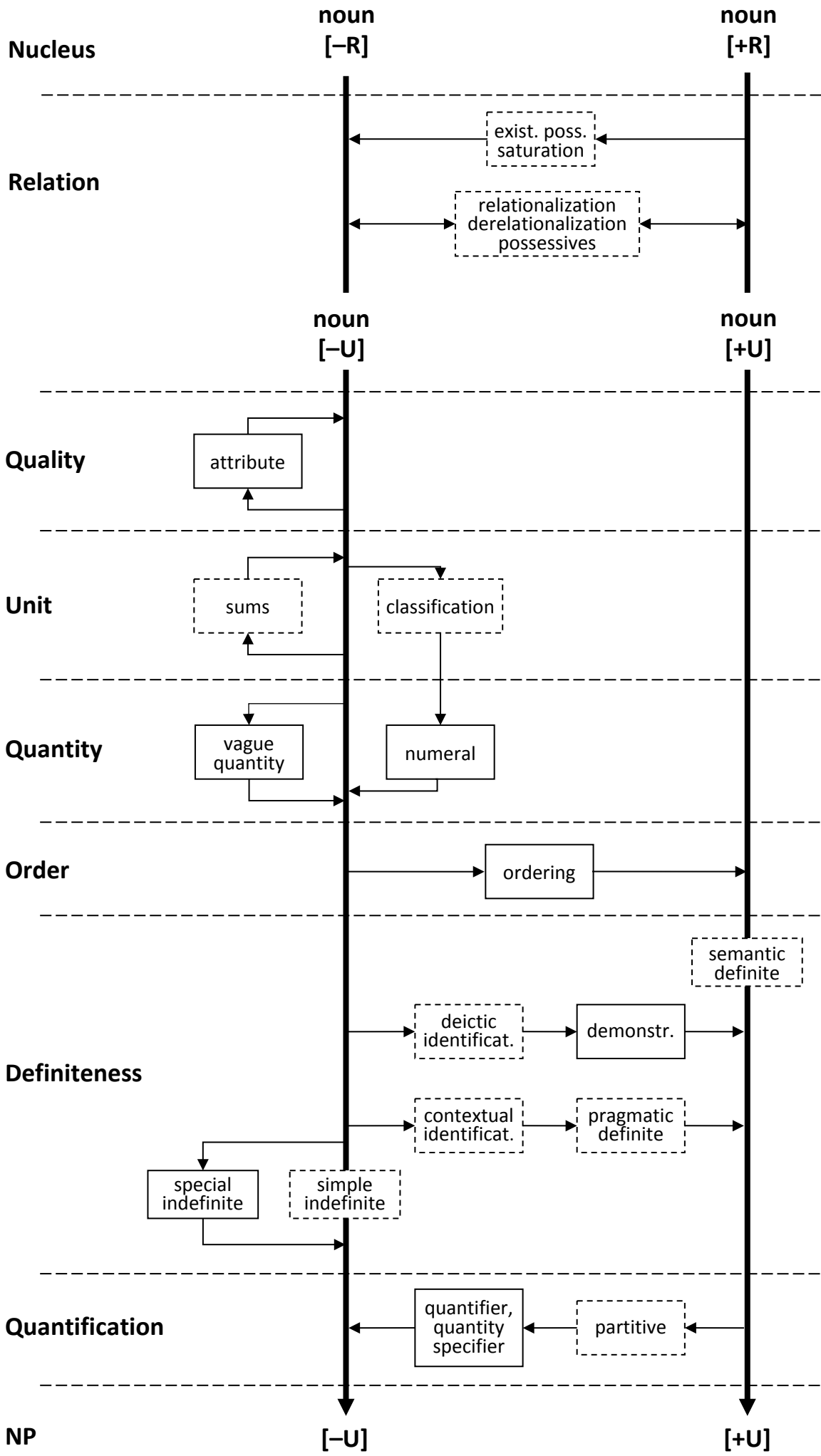
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Hat sieben Häut', beißt alle Leut'



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