

# Prototypical conceptual types and typological variation in parts of speech systems\*

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*The grounds on which Linnæus would fain have banished the whales from the waters, he states as follows: "On account of their warm binocular heart, their lungs, their moveable eyelids, their hollow ears ... ." Be it known that, waving all argument, I take the good old-fashioned ground that the whale is a fish ... . To be short, then a whale is a spouting fish with a horizontal tail.*  
—Herman Melville, *Moby Dick*

Researchers interested in the semantic criteria for parts of speech classifications (e.g. Lyons 1977; Langacker 1987b; Croft 1991, 2000) have generally observed that

- the meanings belonging to particular lexical classes are not the same in all languages
- parts of speech have a robust common core and show variation on their “peripheries”

Such situations are commonly modeled in terms of **prototype effects** (Rosch 1978), and most research in this genre has focused on the properties of prototypical members of lexical classes. This paper will look at two ways in which meanings can be **non-prototypical**:

- 1) a particular meaning or group of meanings may share features with prototypical members of more than one lexical class:
  - HUMAN CHARACTERISTICS are words for characteristics of human beings that can be used to divide them into identifiable classes or KINDS (e.g. *old, lame, lazy*)
  - like adjectives, these words attribute a property — but, like nouns referring to humans, they include a salient **human figure** in their semantic profile
  - as a result, they show intra- and cross-linguistic variation in their categorization as nouns or adjectives (or nouns and verbs if the language lacks adjectives)
- 2) meanings may have intermediate values for features that strongly differentiate two classes:
  - kinship terms and bodyparts are relational terms that define their referents with respect to some other entity, a family-member or a corporeal whole of which they are a part
  - inclusion of this entity in the semantic profile reduces **conceptual autonomy** (Langacker 1987a), a feature distinguishing nouns (autonomous) from verbs (non-autonomous)
  - kinship terms are realized as verbs in some languages
  - bodyparts in other languages act as relational, adposition-like expressions
  - even in languages where kinship terms and bodyparts are clearly nouns, they are often distinctive in that they show inherent or inalienable patterns of possessive marking

Prototype effects thus seem to account not only for the fact of variability in lexical classification, but also account for which meanings are variable and the ways in which they can vary.

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\* I'd like to thank Eugene Casad, Igor Mel'čuk, and Gary Palmer for helpful comments and discussion. Uncited data from Upper Necaxa Totonac are taken from my field notes, collected in the Necaxa River Valley in Mexico over the last six years. Many thanks to my consultants for their support and patience. The Mandinka data in (12) are courtesy of Lamin Jabbi. The abbreviations used here are as follows: 1, 2, 3 = first-, second-, third-person; AGT = agentive nominalizer; ALN = alienable; APL = adjective plural; ART = article; CS = causative; ERG = ergative; FEM = feminine; INALN = inalienable; NPL = noun plural; OBJ = object; PERF = perfect; PFV = perfective; PL = plural; PO = possessive; PST = past; SG = singular.

## 1) Things, kinds and relations

For this paper, I will adopt the following semantic characterizations of the lexical classes noun, verb, and adjective (the pros and cons of these are discussed in Beck 2002):

**noun**: profiles a semantic THING (Langacker 1987a) or a KIND (Wierzbicka 1988)

**verb**: profiles a temporal relation between entities (Langacker 1987a)

**adjective**: profiles an atemporal relation between entities (Langacker 1987a)

- a **profile** is the entity designated by a semantic representation (i.e. what it refers to)
- a **THING** is a discrete object (roughly—see Langacker 1987b for discussion)
- a **KIND** is a categorization of an entity as a member of a class that “can be identified by means of a certain positive image, or a certain positive stereotype, which transcends all enumerable features” (Wierzbicka 1988: 471)
- **temporal relations** take place over time and as such are processes (or durative states)
- **atemporal relations** are relations for which duration is not a relevant parameter or which do not have a temporal profile

Prototypical adjectives profile the value of some property for a schematic argument (Figure 1):

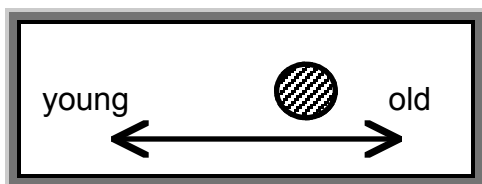


Figure 1. An atemporal relation ‘old’

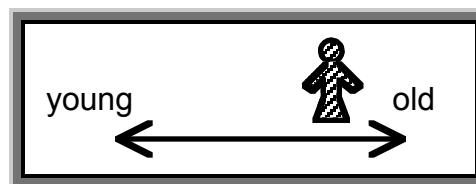


Figure 2. The HUMAN AGE term ‘old’

- Figure 1 profiles (dark lines) the location of a schematic THING on the scale of age
- this THING can be “elaborated” (elaborability is shown by cross-hatching) by a noun referring to what is said to be old (e.g. *old car*, *old book*)
- HUMAN AGE terms in some languages profile the location of a schematic human figure on the scale of age (Figure 2)
- the human figure can be elaborated by a noun referring to a person (e.g. *old woman*)

Adjectives that are applicable only to humans introduce a human figure into their profile:

- they already specify an identifiable semantic THING (a person) as their argument and so are easily extensible to a referential function
- they seem to shift readily, both intra- and cross-linguistically, between profiling the relation the human figure participates in and profiling the human figure itself

This variation applies not only to HUMAN AGE terms but also to a wider class of adjectives applicable to humans which I will refer to here as HUMAN CHARACTERISTICS.

## 2) HUMAN CHARACTERISTICS

HUMAN CHARACTERISTICS (HCs) refer to inherent, definitive qualities of humans that single out individuals as members of an identifiable class or KIND of people. Such words frequently oscillate — both within and across languages — between the classes of noun and adjective.

In English:

- words like *old* and *blind* are adjectival and do not form a robust subclass of adjective
  - in the plural, they allow some recategorization as nouns (*the old*, *the blind*)
  - other adjectives do not allow this (*\*the wet*, *\*the soft*)

In Upper Necaxa Totonac HUMAN CHARACTERISTICS are nouns (Beck 2000). These include:

- HUMAN AGE terms such as *ʔawátʃa* ‘young person’ and *ʔo:lú:* ‘old person’
- words referring to human deficiencies or physical handicaps such as *qʔatáp* ‘deaf person’, *ʔóʔo* ‘mute person’, *ʔki:tít* ‘lazy person’

The HC *ʔki:tít* ‘lazy person’ contrasts with the adjective *ʔáʔa* ‘big’ in these diagnostic frames:

Pluralization

- (1) a. *ʔki:tít-nín* vs. *\*lak-ʔki:tít* b. *\*ʔáʔa-nín* vs. *lak-ʔáʔa tʃiʃkuwín*  
 lazy-NPL APL-lazy big-NPL APL-big men  
 ‘lazy people’ \*‘lazy people’ \*‘big (ones)’ ‘big men’

- HUMAN CHARACTERISTICS are pluralized like nouns, not like adjectives

Modifiability

- (2) a. *tsex ʔki:tít* b. *\*tsex ʔáʔa*  
 good lazy good big  
 ‘good lazy fellow’ \*‘good big one’

Possession

- (3) a. *ki-ʔki:tít* b. *\*kin-ʔáʔa*  
 1PO-lazy 1PO-big  
 ‘my lazy fellow’ \*‘my big one’

- as nouns, HC can be modified and possessed, adjectives can not

Use as arguments

- (4) a. *ik-ləʔtsí-ʔ ʔki:tít* b. *\*ik-ləʔtsí-ʔ ʔáʔa*  
 1SG-see-PFV lazy 1SG-see-PFV big  
 ‘I saw the lazy one’ \*‘I saw the big one’

- UNT allows the use of some adjectives as arguments, but only anaphorically in context
- even in these cases, adjectives remain unmodifiable and cannot be possessed

Plural agreement in copular constructions:

- (5) a. *tsamá: lak-ʔawátʃa-n ʃ-ta-wan-í:*  
 this APL-young-NPL PST-3PL-become-PERF  
 ‘these were young folks’
- b. *\*tsamá: ʔawátʃa ʃ-ta-wan-í:*  
 this young PST-3PL-become-PERF  
 \*‘these were young folks’
- c. *tsamá: ma:-ʔeʔ-tawaʔ-e:-ni-nín ʃ-ta-wan-í:*  
 this CS-mouth-study-CS-AGT-NPL PST-3PL-become-PERF  
 ‘these were teachers’
- d. *\*tsamá: lak-páʔa ʃ-ta-wan-í:*  
 this APL-hard PST-3PL-become-PERF  
 \*‘these were hard’

- number agreement with a 3PL subject is obligatory for HCs and nouns used as predicate complements of copular constructions, but is ungrammatical for adjectives

"tunká-diagnostic":

- (6) a. \*fla ʔo:lú: tunká if-Ø-wan-í:  
he old very PST-3SG-become-PERF  
\*‘he was very old’
- b. \*fla ma:-ʔeɪ-tawaʔ-e:-ní tunká if-Ø-wan-í:  
he CS-mouth-study-CS-AGT very PST-3SG-become-PERF  
\*‘he was very teacher’, \*‘he was a real teacher’
- c. fla s’a:láɫ tunká if-Ø-wan-í:  
he intelligent very PST-3SG-become-PERF  
\*‘he was very intelligent

- the quantifier *tunká* applies to gradable semantic predicates in UNT
- HUMAN CHARACTERISTICS pattern with nouns rather than with adjectives

However, UNT HCs do differ from ordinary nouns in their use as modifiers:

- (7) a. aʔatá:p tʃiʃkú  
deaf man  
‘deaf man’
- b. ɪki:tít puská:t  
lazy woman  
‘lazy woman’
- c. tsewaní tsumaxát  
pretty girl  
‘pretty girl’
- d. \*ɪtukíta kúʃi : \*kúʃi ɪtukíta  
atole corn corn atole  
\*‘corn atole’ \*‘corn atole’

- in (7a) and (b), HCs can be modifiers of nouns, as can ordinary adjectives (7c)
- ordinary nouns, however, are not eligible for this role (7d)

Unlike adjectives, though, HCs can only modify nouns referring to humans or animals:

- (8) a. tsewaní ɪamám  
pretty ceramic.pot  
‘a nice ceramic pot’
- b. \*ʔo:lú: ɪamám  
old ceramic.pot  
\*‘old ceramic pot’

- this implies the notion of ‘person’ (or ‘personified being’) in the profile of HCs

Given that HCs have so many nominal morphosyntactic properties, it is more likely that the attributive uses in (7) are extended uses; the variability stems from their semantic properties:

- like adjectives, HCs attribute a property or characteristic to a schematic (human) figure
- as nouns, HC profile a person who is a member of a particular KIND identified with that property or characteristic (‘age’, ‘laziness’, etc.)
- a person referred to as, for example, ʔo:lú: ‘old person’ may be assumed to have other characteristics associated with age (wisdom, possession of traditional knowledge, etc.)
- as modifiers, HCs lose these “extra” notions, so ʔo:lú: tʃiʃkú ‘old man’ ≠ ʔo:lú: ‘elder’

The profile of HUMAN CHARACTERISTICS used as modifiers shifts from the human figure with the property to the property as predicated of that human figure, as shown in Figures 3 and 4:

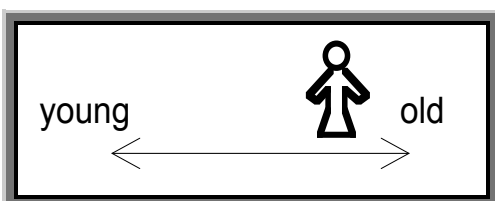


Figure 3. ʔo:lú: ‘old person’



Figure 4. ʔo:lú: ‘old’

- Figure 3, a noun, profiles a human figure with a relation (scale of age) as part of its base
- the human figure is not elaborable (it is **conceptually autonomous** — see next section below) and as such the expression is like a noun
- in Figure 4, an adjective, the human figure is elaborable and the relation itself is profiled ( $\approx$  'old(X)', where X can be specified by combining the expression with a noun)

To sum up, we can compare HUMAN CHARACTERISTICS in English and UNT:

- in English, HC are adjectives that profile properties typical of but not necessarily exclusive to humans (= Fig. 1)
  - the basic meanings of the words *deaf*, *lazy*, and *lame* are the properties themselves
  - there is some possibility of recategorization as nouns (*the rich*, *the blind*) (= Fig. 3)
- in UNT, HC like 'aged', 'lazy', and 'mute' are nouns (= Fig. 3)
  - semantically, they profile the person these properties are attributed to
  - HC can be extended to adjectival use, modifying nouns referring to humans (= Fig. 4)

Thus, while English and UNT differ in the way HUMAN CHARACTERISTICS are classified in the lexicon, they agree as to their potential for recategorization, good evidence for the inherent variability of a class that shares properties prototypical of adjectives and nouns.

### 3) Conceptual autonomy

Langacker (1987a, 1987b) suggests that one of the major semantic criteria separating verbs from nouns (that is, THINGS from relations) is **conceptual autonomy**:

**conceptual autonomy**: the degree to which a semantic structure exists on its own, without presupposing another structure

- prototypical nouns are conceptually autonomous in that they can be conceived of without reference to any other independent entity
- verbs, adjectives, adpositions, and other relational expressions are non-autonomous in that they profile relations or processes and, as such, can be conceived of only in the context of other entities involved in those relations or undergoing those processes

The distinction can be represented graphically as in Figures 5 and 6:



Figure 5. A semantic THING, 'person'



Figure 6. A semantic relation, 'on top of'

- Figure 5 shows the representation of a prototypical semantic THING, a discrete element whose profile includes only itself
- Figure 6 shows a semantic relation, 'on top of', which in addition to itself includes two schematic elements (the circles), whose spatial configuration it profiles
- because it includes two other elements, Figure 6 is conceptually non-autonomous
- in a typical relation, these elements can be elaborated (shown by cross-hatching)

As noted in Beck (2002, 2003), an expression's profile can be partially autonomous:



Figure 7. Relational noun 'husband'

- a noun like *husband* profiles a prototypically autonomous entity, a person
- the notion 'husband' depends for its meaning on the human figure's relation to another person ('wife')
- 'wife' is *not* profiled in that it is entailed, but not referred to, by the noun

- an element which is part of the meaning of an expression but is not profiled (referred to) by it is said to be part of its **base** (Langacker 1987a)

Thus, relational nouns like kinship terms and bodyparts show a reduced degree of conceptual autonomy because they include the notion of, but do not profile, some other semantic THING. Cross-linguistically, the result is a wide range of variable morphosyntactic behaviour.

#### 4) Kinship terms and bodyparts

Like HUMAN CHARACTERISTICS, words expressing degrees of kinship and bodyparts across languages show variable morphosyntactic behaviour, or even variable lexical classification:

- kinship terms in some languages are expressed through the use of **kinship verbs**
- bodyparts in some languages become adposition-like **expressions of spatial relations**
- more commonly, both kinship terms and bodypart expressions are nouns, but show **inherent** and **inalienable possession**

This is attributable to the reduced conceptual autonomy of kinship terms and bodyparts:

- like prototypical nouns, they profile concrete, identifiable THINGS or KINDS
- unlike prototypical nouns, they include in their base some other THING or KIND, either another person (kinship terms) or a whole of which they are a part (bodyparts)

The fact that the first property (profiling THINGS) is so typical of nouns accounts for the overwhelming cross-linguistic tendency of kinship terms and bodyparts to be nouns.

#### 4.1) Kinship verbs

Kinship terms refer to humans and so profile THINGS or KINDS. Like transitive verbs, however, they also specify a relation between two THINGS — the person named by the term (the **referent**) and the person relative to whom the degree of kinship is measured (the **propositus**), as in (9):

(9) Bill's                      mother  
       *propositus*                *referent*

As documented in Evans (2000), some languages lexicalize kinship terms as transitive verbs with the *propositus* as object and the *referent* as subject, as in Ilgar (Evans 2000: 117):

##### Ilgar

(10) *ŋan-ŋa-wulaŋ*  
       1SG.OBJ-3SG.FEM.ERG-be.mother.to:NON.PAST  
       'my mother' (lit. 'she is my mother')

Such verbs make the relational nature of kinship terms syntactically explicit and is a logical consequence of their reduced conceptual autonomy: despite profiling prototypical THINGS (the *referent*), they include another THING (the *propositus*) in their base.

## 4.2) Bodyparts as relational expressions

Bodyparts, like prototypical nouns, profile concrete THINGS, but are atypical in that these THINGS exist (barring dismemberment) in a part-whole relation. This inherent relationality leads to recategorization of bodypart terms as preposition-like expressions of relative location:

### Upper Necaxa Totonac

- |         |                                 |       |    |                                   |       |
|---------|---------------------------------|-------|----|-----------------------------------|-------|
| (11) a. | na-k-wi:lí: f-pɛʔstún           | mesa  | b. | na-k-wi:lí: f-akpún               | mesa  |
|         | FUT-1SG-put 3PO-shoulder        | table |    | FUT-1SG-put 3PO-crown             | table |
|         | 'I'll put it next to the table' |       |    | 'I'll put it on top of the table' |       |

- in (11a) *fpeʔstún mesa* 'the shoulder of the table' expresses a location, the GOAL of the act of putting, and uses a possessive prefix to link the part expression to its whole
- in (11b) a different bodypart — *-akpún* 'crown' — expresses a different spatial relation
- like a preposition, these bodyparts allow an extra NP in the clause which otherwise requires the use of the locative clitic *nak=* (*nakwi:lí: nak=mesa* 'I'll put it on the table')

The bodypart terms shown here are extended to profile a spatial relation between an outside entity and the whole (a relation). This makes them analogous to adpositions, which are atemporal relations that frequently profile a spatial configuration of two or more THINGS.

## 4.3) Inalienable and inherent possession

Because kinship terms and bodyparts profile a person or discrete physical object, the overwhelming cross-linguistic preference is to lexicalize them as nouns. However, they often form a distinctive subclass of noun, distinguished by patterns of inalienable or inherent possession.

### Inalienable possession

Kinship terms and bodyparts often require a special paradigm of possessive markers:

#### Mandinka

- |      |                               |                              |
|------|-------------------------------|------------------------------|
| (12) | <i>n-dímùsò</i> 'my daughter' | <i>na-wùlòò</i> 'my dog'     |
|      | <i>m-fáama</i> 'my father'    | <i>na-daadey</i> 'my animal' |
|      | <i>ŋ-kúti:jà</i> 'my hair'    | <i>na-sàmátò</i> 'my shoe'   |

- inalienably possessed nouns take the 1SG.INALN.PO prefix, *N-*, shown in the first column
- ordinary nouns, however, take the 1SG.ALN.PO prefix, *na-*

In Hawaiian, there are contrastive uses of alienable and inalienable possessive markers on the same noun (Trask 1993: 136 – 37):

#### Hawaiian

- |      |                               |      |        |     |   |                             |      |          |     |
|------|-------------------------------|------|--------|-----|---|-----------------------------|------|----------|-----|
| (13) | na                            | iwi  | a      | pua | : | na                          | iwi  | o        | pua |
|      | ART                           | bone | ALN.PO | Pua |   | ART                         | bone | INALN.PO | Pua |
|      | 'Pua's bones' (that she eats) |      |        |     |   | 'Pua's bones' (in her body) |      |          |     |

- the alienable possessive marker *a*, indicates the following NP is an ordinary possessor
- the inalienable possessive *o* indicates the following NP expresses an entity that is part of the base of the possessed noun

Systems of inalienable possession fall out from the recognition of the non-prototypical nature of inalienably possessed nouns and of their relation to their possessors.

### Inherent possession

Kinship terms and bodyparts are often inherently possessed — that is, they can not be expressed without overt marking for a possessor, as in UNT terms for kinship and bodyparts:

(14) <i>ifnáp</i>	'his/her aunt'	<i>ifʔaʔalqʔót</i>	'3SG's horn'
<i>ifna:ná</i>	'his/her grandmother'	<i>iftfe:ʔé:n</i>	'3SG's leg'
<i>ifnapa:skín</i>	'her sister-in-law'	<i>ifpa:ftapún</i>	'3SG's kidney'

- possessed NPs take an obligatory possessive person prefix (cf. *kináp* 'my aunt')
- if the possessor is plural, the possessed NP takes the suffix *-kan* (*kinapkán* 'our aunt')

Inherently possessed nouns are non-prototypical in that their base includes a relation to some other semantic THING. This relationality results in a syntactic resemblance to verbs:

- like verbs, inherently possessed nouns have an empty syntactic "slot" that must be filled, requiring the realization of an accompanying NP or pronominal complement
- inherently possessed nouns are inflected for their possessors just as verbs are inflected for their subjects

This suggests a parallel between relational nouns and deverbal nouns and participles or gerunds, which also have entities in their semantic bases which are non-elaborable or only elaborated by special means (see Beck 2003 for some discussion).

## 5) Conclusion

Prototype models of lexical classes account for not only the fact that there *is* variation in parts of speech systems, but also

- a) identify areas where we might expect to find variation; and
- b) predict what form this variation can be expected to take.

We saw two examples of this, each motivated by different factors:

- HUMAN CHARACTERISTICS share semantic features with both nouns and adjectives
  - like nouns, they include a human figure in their profile
  - like adjectives, they refer to a property of a schematic argument
- as a result, HC show intra- and cross-linguistic variation between adjective and noun
  - in English, they are adjectives, though they take on nominal roles in the plural
  - in UNT, they are nouns but can be used to modify nouns referring to humans
- kinship terms and bodyparts are partially but not completely conceptually autonomous
  - like nouns, they refer to discrete objects or THINGS
  - like relational expressions (in this case, verbs and prepositions), they include some other THING in their semantic base
- as a result, they can be nouns, relational expressions, or something in between
  - in some languages, kinship terms are verbs
  - in other languages, bodyparts are used to express spatial relations
  - inalienable possession recognizes the special, non-autonomous relation between a relational noun and the argument included in its semantic base
  - inherent possession treats this inherent argument in much the same way that a verb treats its arguments, requiring the elaboration of an entity in its profile

These are interesting results, and application of this methodology to other areas of typological variation in parts of speech systems seems to be a promising avenue for future investigation.



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