

Valence

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Valence changing constructions

Valence decreasing

- Passive
- Antipassive
- Nominalization

Valence increasing

- Applicative
- Causative

Causative

- (1) Turkish (Comrie 1989: 175)
Hasan-öl-dü.
Hasan-die-pst
'Hasan died.'

- (2) Turkish (Comrie 1989: 176)
Ali Hasan-ı öl-dür-dü.
Ali Hasan-acc die-caus-pst
'Ali caused Hasan to die (Ali killed Hasan).'

Causative

- (3) Turkish (Comrie 1989: 176)
Müdür mektub-u imzala-dı.
Director letter-acc sign-pst
'The director signed the letter.'
- (4) Turkish (Comrie 1989: 176)
Dişçi mektub-u müdür-e imzala-t-tı
Dentist letter-acc director-dat sign-caus-pst
'The dentist got the director to sign the letter.'

Causative

(5) Turkish (Comrie 1989: 176)

Müdür Hasan-a mektub-u göster-di.

Director Hasan-dat letter-acc show-pst

'The director showed the letter to Hasan.'

(6) Turkish (Comrie 1989: 176)

Dişçi Hasan-a mektub-u müdür tarafından göster-t-ti.

Dentist Hasan-dat letter-acc director by show-caus-pst

'The dentist got the director to show the letter to Hasan.'

subject > direct object > indirect object > oblique



Word order typology

Basic word order

Japanese

SOV

(1) Taro ga inu o mita
Taro SUB dog OBJ saw
'Taro saw the dog.'

Kinyarwanda

SVO

(2) Umugore arasoma igitabo
woman 3S-read book
'The woman is reading a book.'

Welsh

VSO

(3) lladdodd y ddraig y dyn
killed the dragon the man
'The dragon killed the man.'

Basic word order

Malagasay

VOS

- (4) Manasa lamba amin'ny savony ny lehilahy
washes clothes with.the soap the man
'The man washes clothes with the soap.'

Hixkaryana

OVS

- (5) toto yahosiye kamara
man it.grabbed.him jaguar
'The jaguar grabbed the man.'

Urubú

OSV

- (6) pako xuā u'u
banana John he.ate
'John ate bananas.'



Word order flexibility

English

- | | | |
|-----|-------------------------------------|-------------|
| (1) | Peter bought the blue book. | SVO |
| (2) | *Peter the blue book bought. | SOV |
| (3) | *Bought Peter the blue book. | VSO |
| (4) | *Bought the blue book Peter. | VOS |
| (5) | *The blue book bought Peter. | OVS |
| (6) | The blue book, Peter bought. | OSV |
| (7) | Never did Peter buy a book. | ADV-AUX-SVO |
| (8) | Across the bridge lived an old man. | ADV-VS |

Walpiri

- | | | | |
|-----|--|------------------|-----|
| (1) | ngarraka- ngku ka wawirri | panti-rni | SOV |
| | man-ERG AUX kangaroo | spear-NONPST | |
| | 'The man is spearing the kangaroo.' | | |
| (2) | wawirri ka panti-rni ngarraka-ngk | | OVS |
| (3) | wawirri ka ngarraka-ngku panti-rni | | OSV |
| (4) | ngarraka-ngku ka panti-rni wawirri | | SVO |
| (5) | panti-rni ka wawirri ngarraka-ngku | | VOS |
| (6) | panti-rni ka ngarraka-ngku wawirri | | VSO |

→ Wackernagel's law

Walpiri

- (1) **wawirri** kapirna panti-rni **yalumpa**
 kangaroo AUX spear-NONPST that
 'I will spear the kangaroo.'

Discontinuous NP → very rare phenomenon

Behaghel's erstes Gesetz:

Geistig eng Zusammengehöriges wird auch eng zusammengestellt.



What is the basic word order of German?

German

(1)	Peter kaufte das blaue Buch.	SVO
(2)	Das blaue Buch kaufte Peter.	OVS
(3)	*Kaufte Peter das blaue Buch.	VSO
(4)	*Kaufte das blaue Buch Peter.	VOS
(5)	*Das blaue Buch Peter kaufte.	OSV
(6)	*Peter das blaue Buch kaufte.	SOV

In basic declarative sentences including a simple verb form, the dominant word order pattern is S-V-O.

German

- | | | |
|-----|-----------------------------|-----------|
| (1) | Peter hat das Buch gekauft. | S-AUX-O-V |
| (2) | Das Buch hat Peter gekauft. | O-AUX-O-V |

In basic declarative sentences including a complex verb form, the dominant word order pattern is S-AUX-O-V.

German

- (1) Morgen sehe ich ihn wahrscheinlich. ADV-V-S-O
- (2) Gestern haben wir uns mit Freunden getroffen. ADV-AUX-S-O-V

In basic declarative sentences including an adverbial, both subject and object often occur in postverbal position.

German is a V-second language.

German

- (1) Wir kommen dann sofort zu dir, wenn wir angekommen sind.

Basic word order in subordinate clauses is SOV, but ...

- (2) Er hat immer behauptet, das sei falsch.

V-second word order in complex sentences with preposed SUB-clauses:

- (3) Als ich noch in Berlin gewohnt habe, habe ich sie oft gesehen.
(4) Wenn ich das noch mal sagen darf, das hier ist nicht richtig.

German

How do we account for this diversity?

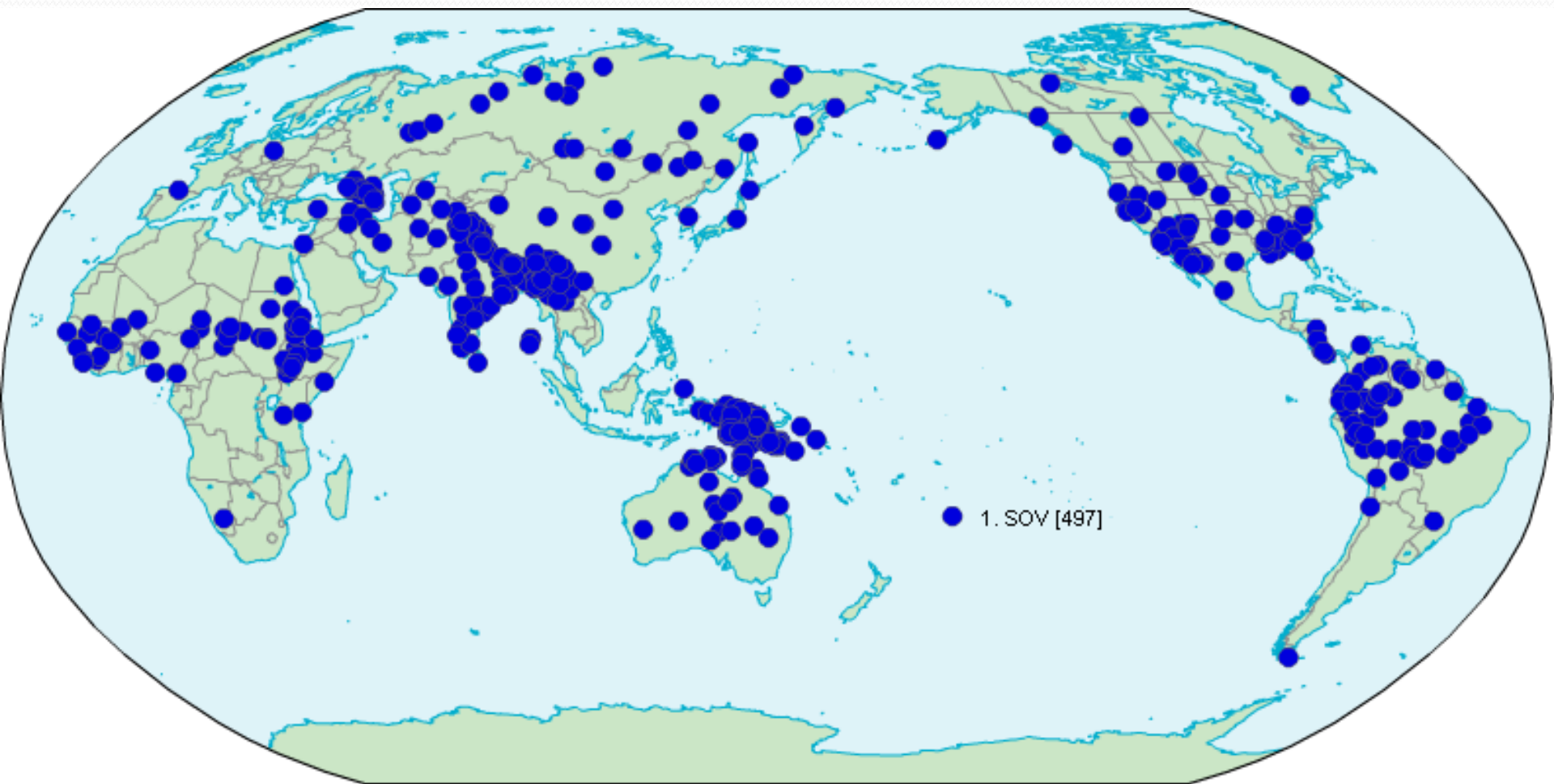
- Basic word order of Germanic is S-O-V or ADV-S-O-V
- Wackernagel's law introduces the 'Satzklammer': S-AUX-O-V
- The auxiliary establishes a new pattern for sentences with simple verb forms, i.e. V-second: S-V-O, ADV-V-S-O
- In other Germanic languages (e.g. English), the main verb is attracted by the auxiliary to second position: S-AUX-V-O
- These developments occur first and primarily in main clauses; subordinate clauses are 'conservative'.



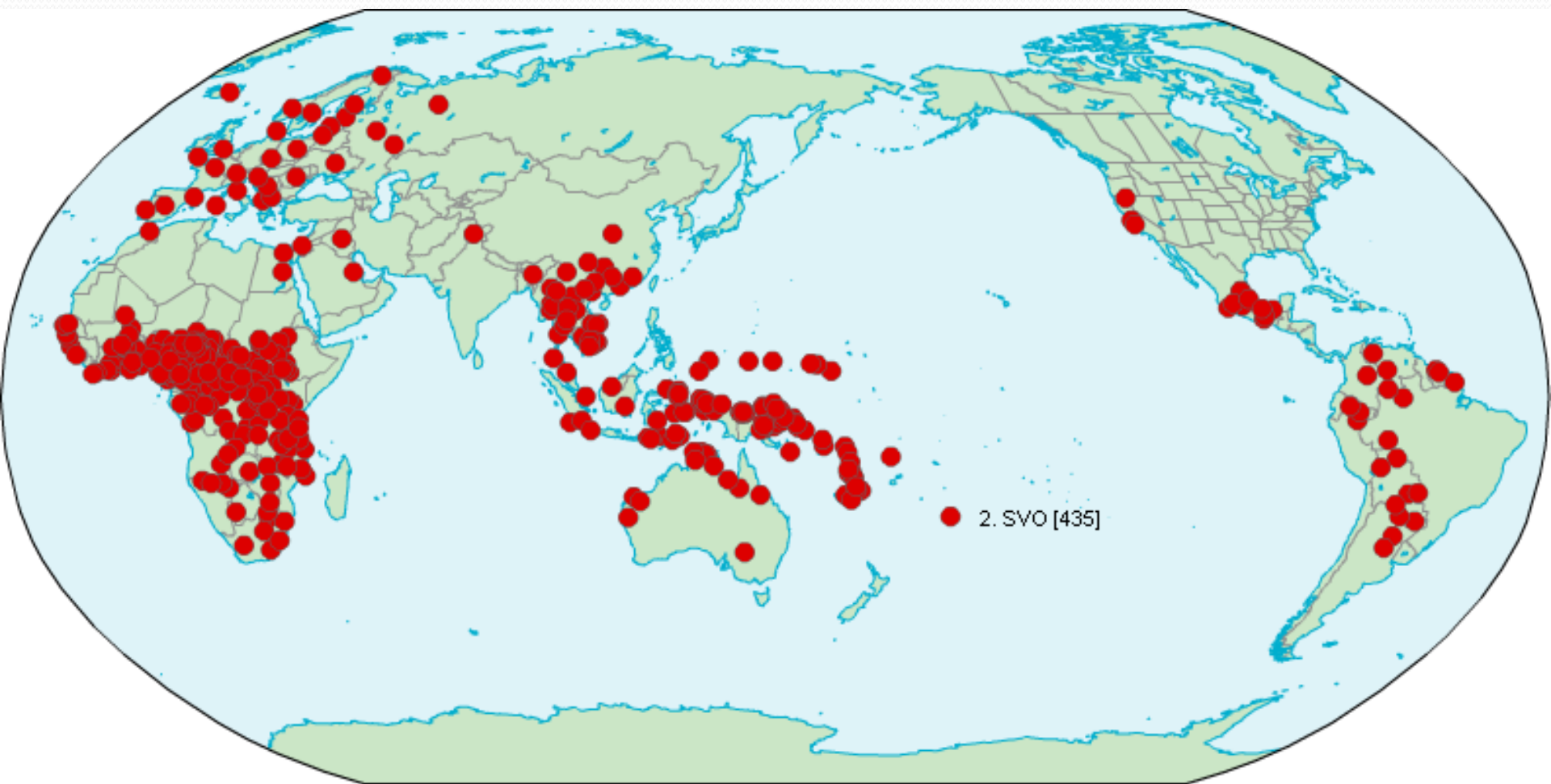
Cross-linguistic distribution

Basic word order

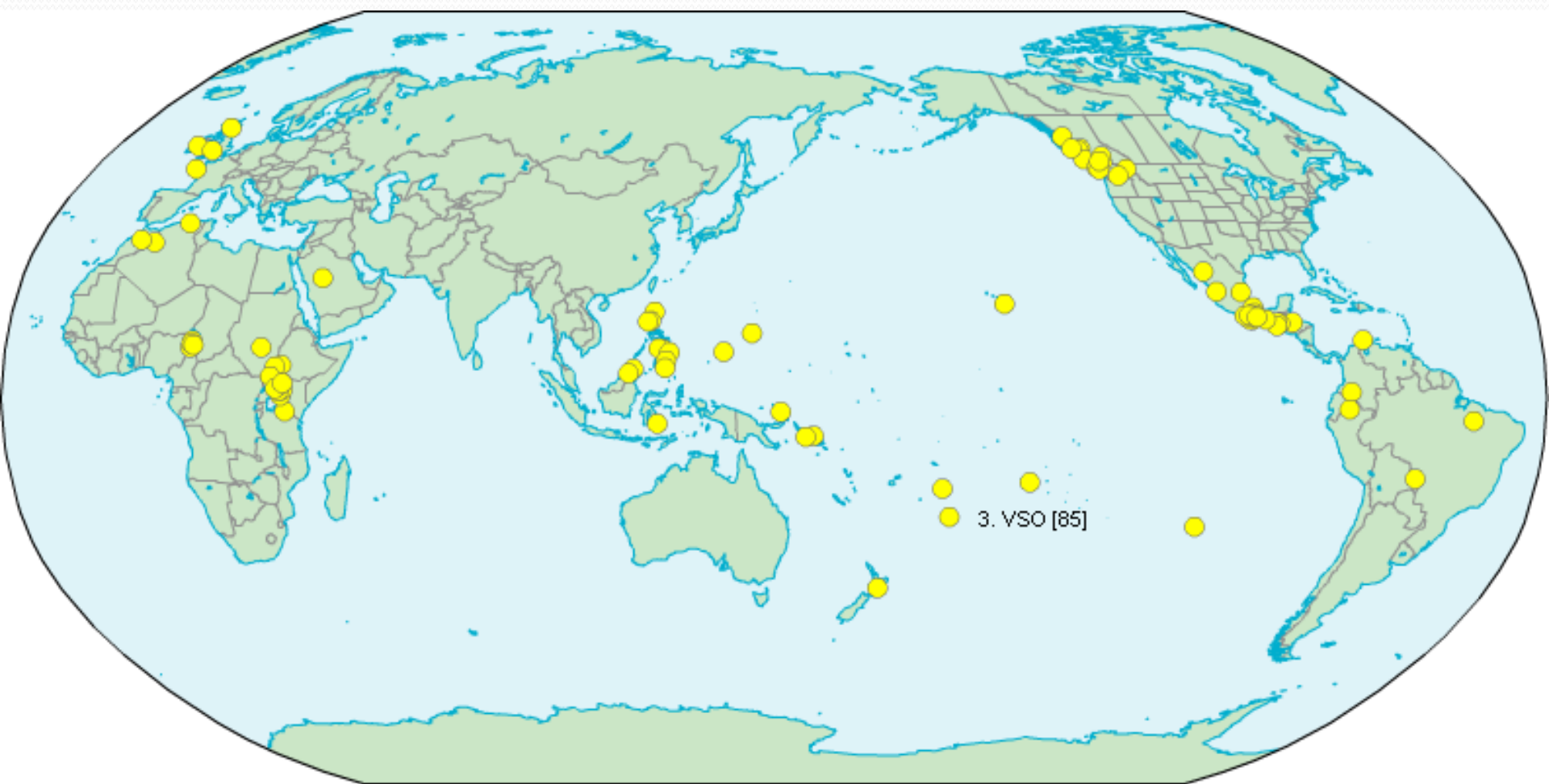
- SVO and SOV are by far the most common word orders.
- VSO is moderately frequent.
- All other word orders are rare.



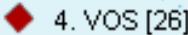
SOV (Dryer 2005)



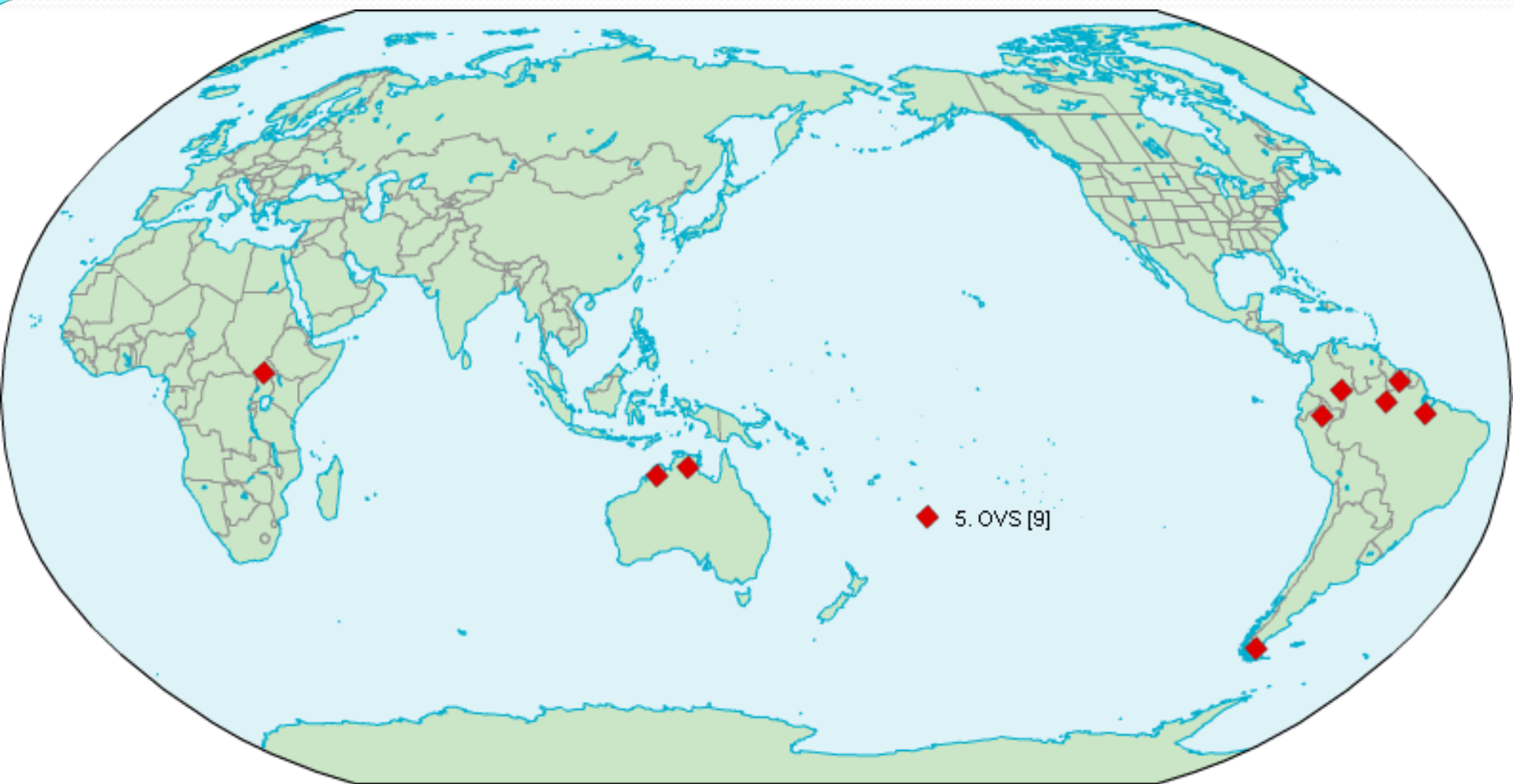
SVO languages (Dryer 2005)



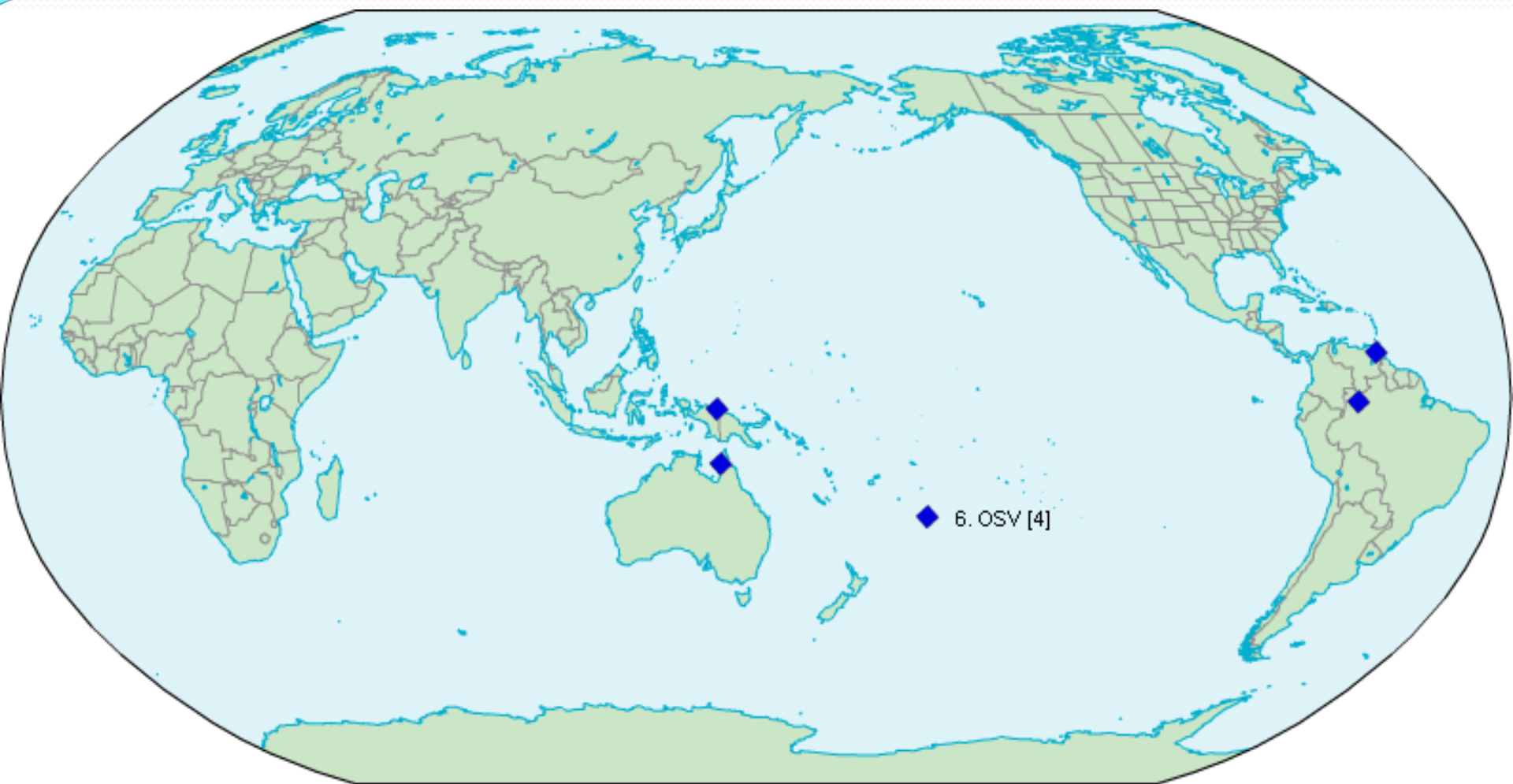
VSO languages (Dryer 2005)



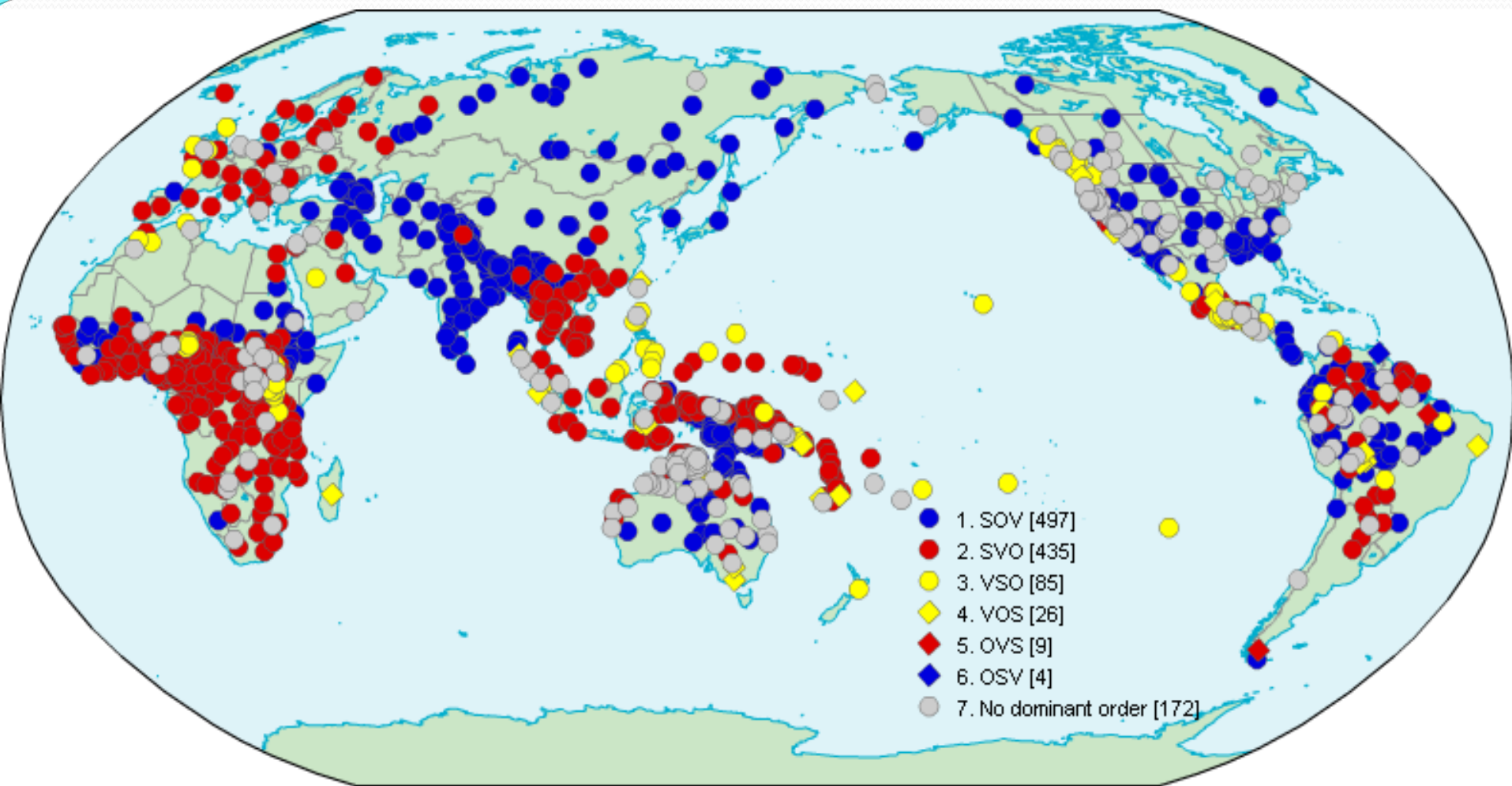
VOS languages (Dryer 2005)



OVS languages (Dryer 2005)



OSV languages (Dryer 2005)



(Dryer 2005)

Basic word order

Dryer 2005

Order	Number	%
SOV	497	47
SVO	435	41
VSO	85	8
VOS	26	2.5
OVS	9	0.85
OSV	4	0.38
Total	1056	100

Basic word order

	Dryer 2005		Tomlin 1986	
Order	Number	%	Number	%
SOV	497	47	180	45
SVO	435	41	168	42
VSO	85	8	37	9
VOS	26	2.5	12	3
OVS	9	0.85	5	1
OSV	4	0.38	0	0
Total	1056	100	402	100

Basic word order

- The subject tends to precede the object (95%).
- The object tends to occur next to the verb (91%).

Basic word order

Order	S - O
-------	-------

SVO	+
-----	---

SOV	+
-----	---

VSO	+
-----	---

VOS	-
-----	---

OVS	-
-----	---

OSV	-
-----	---

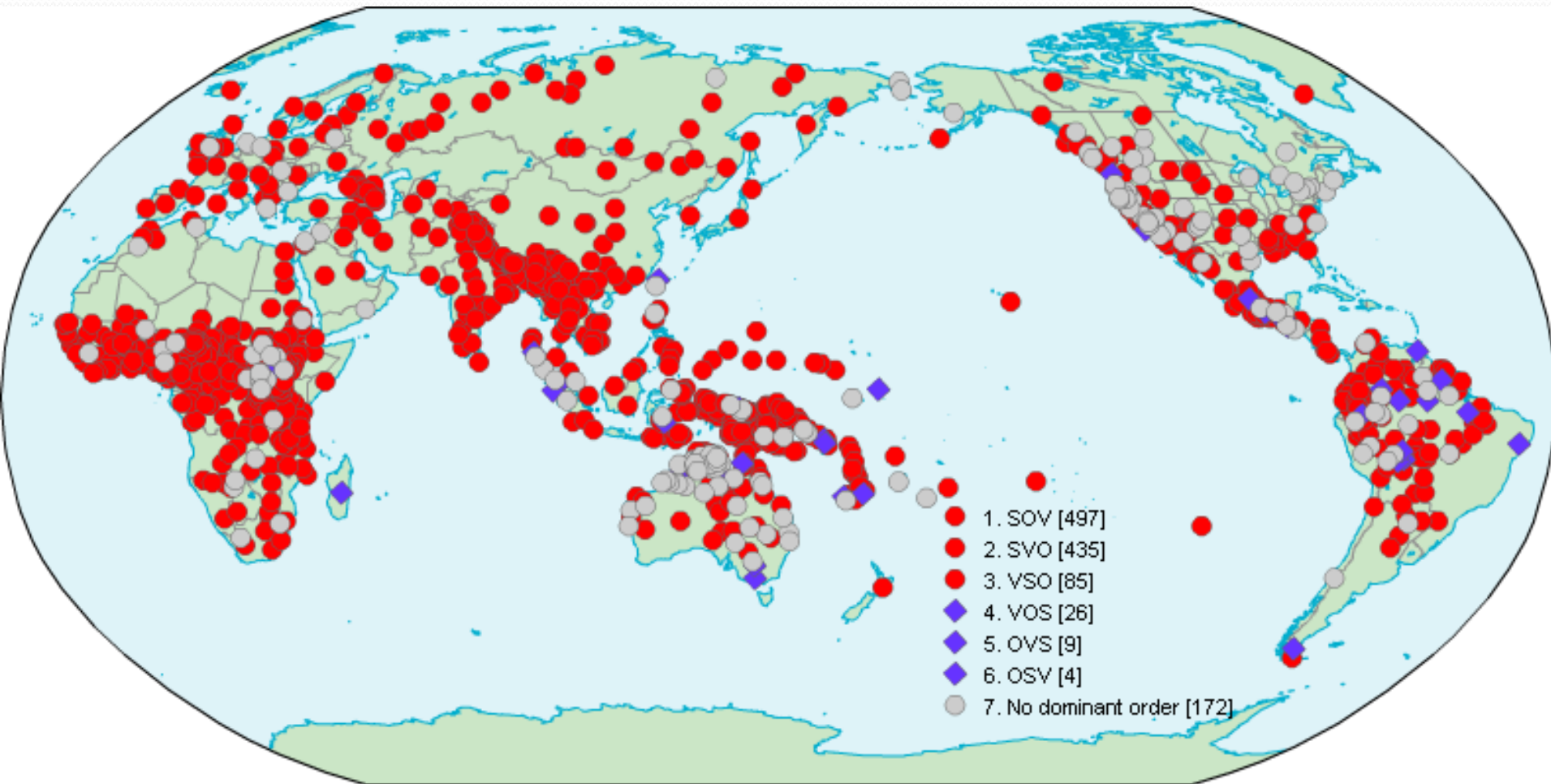
Basic word order

Order	S - O	VO/OV
SVO	+	+
SOV	+	+
VSO	+	-
VOS	-	+
OVS	-	+
OSV	-	-

Basic word order

Order	S - O	VO/OV	Total
SVO	+	+	++
SOV	+	+	++
VSO	+	-	+
VOS	-	+	+
OVS	-	+	+
OSV	-	-	-

Why does the subject tend to precede the object?



Basic word order (Dryer 2005)

Why does the subject tend to precede verb and object?

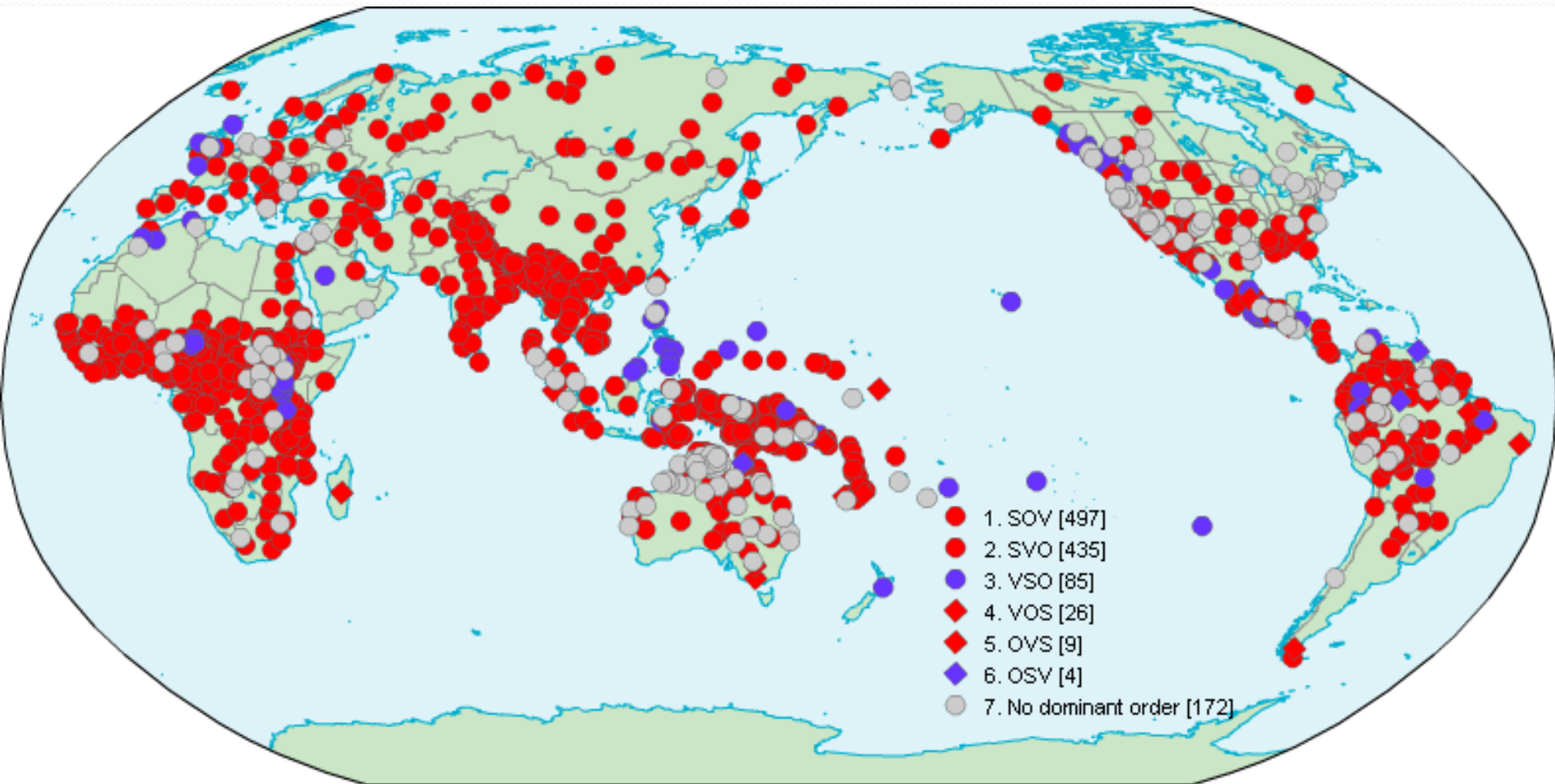
The subject tends to be the topic.

- (1) Peter noticed that Sally wasn't there. **She** had to attend a class in linguistics.

Given/old information helps the hearer to interpret subsequent information, i.e. it provides an orientation at the beginning of the clause.

The subject can be seen as a grammaticalized topic.

Why does the object tend to be adjacent to the verb?



Basic word order (Dryer 2005)

Why does the object tend to be adjacent to the verb?

Verb and object form a tight conceptual unit.

- (1) a. They are hunting a fox.
- b. They are fox-hunting.
- (2) a. I am taking care of my sister's baby.
- b. I am baby-sitting.



Word order correlations

Word order correlations

Based on the ordering of verb and object, languages are commonly divided into two basic word order types: VO-languages and OV-languages.

VO

prepositional

head-initial

right-branching

OV

postpositional

head-final

left-branching

Greenberg (1966) discovered that the ordering of verb and object correlates with the ordering of other elements in the clause.

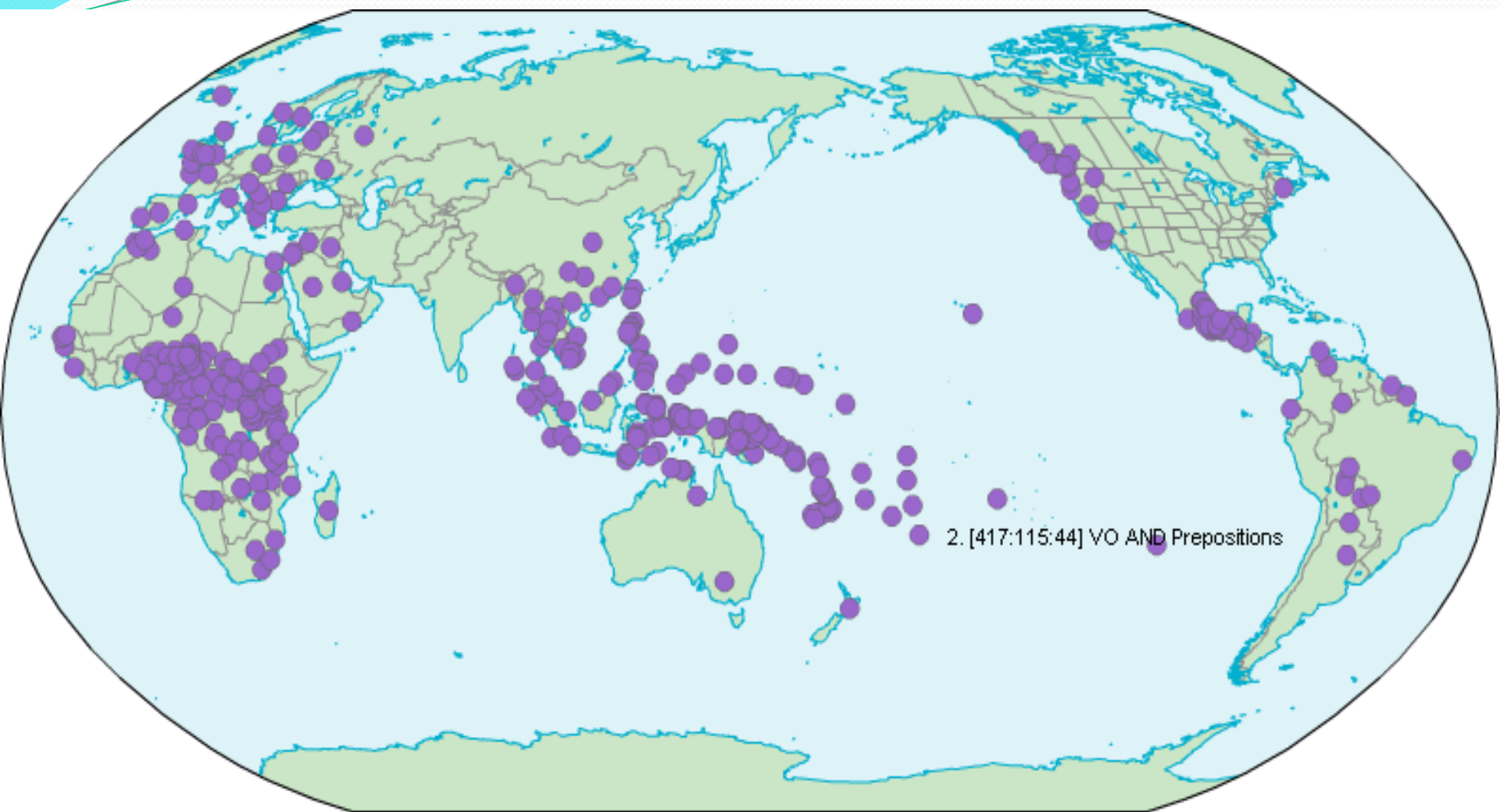
Prepositions vs. Postpositions

(1) English

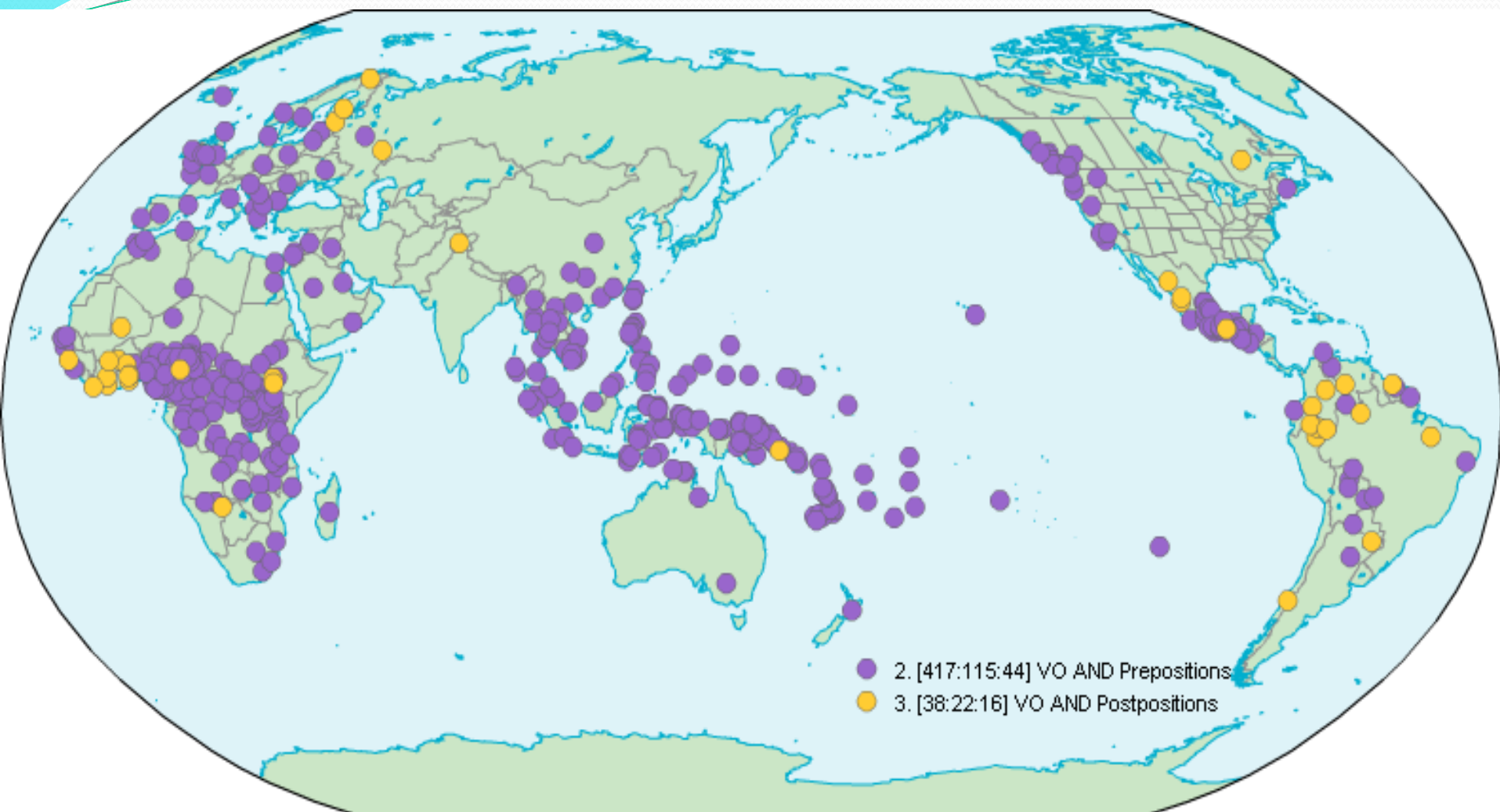
Peter **saw** the man [**in** the garden].

(2) Japanese

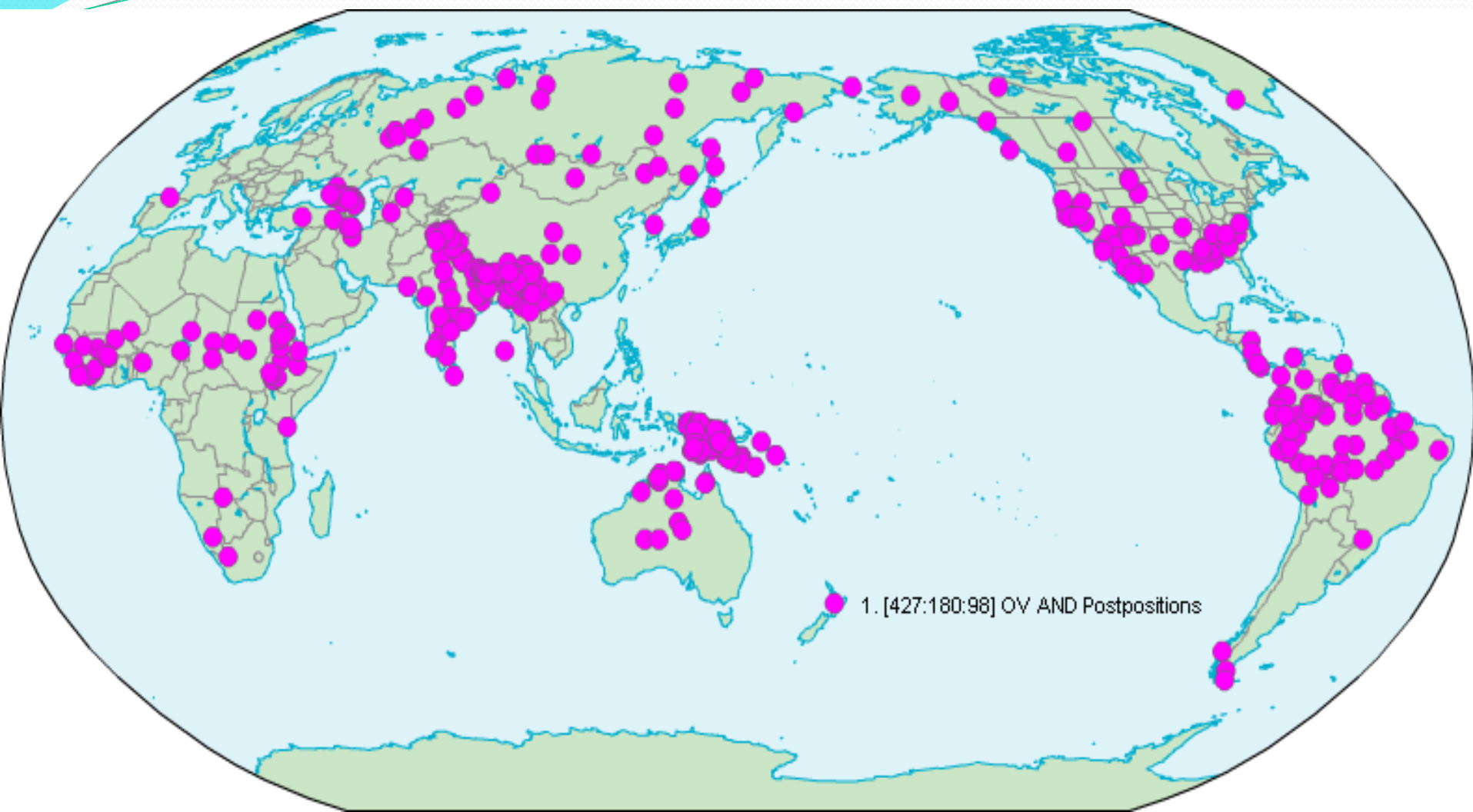
John ga [Mary **to**] [kuruma **de**] [kobe **ni**] **it-ta**
John SU Mary with car by Kobe to go-PST
'John went to Kobe by car with Mary.'



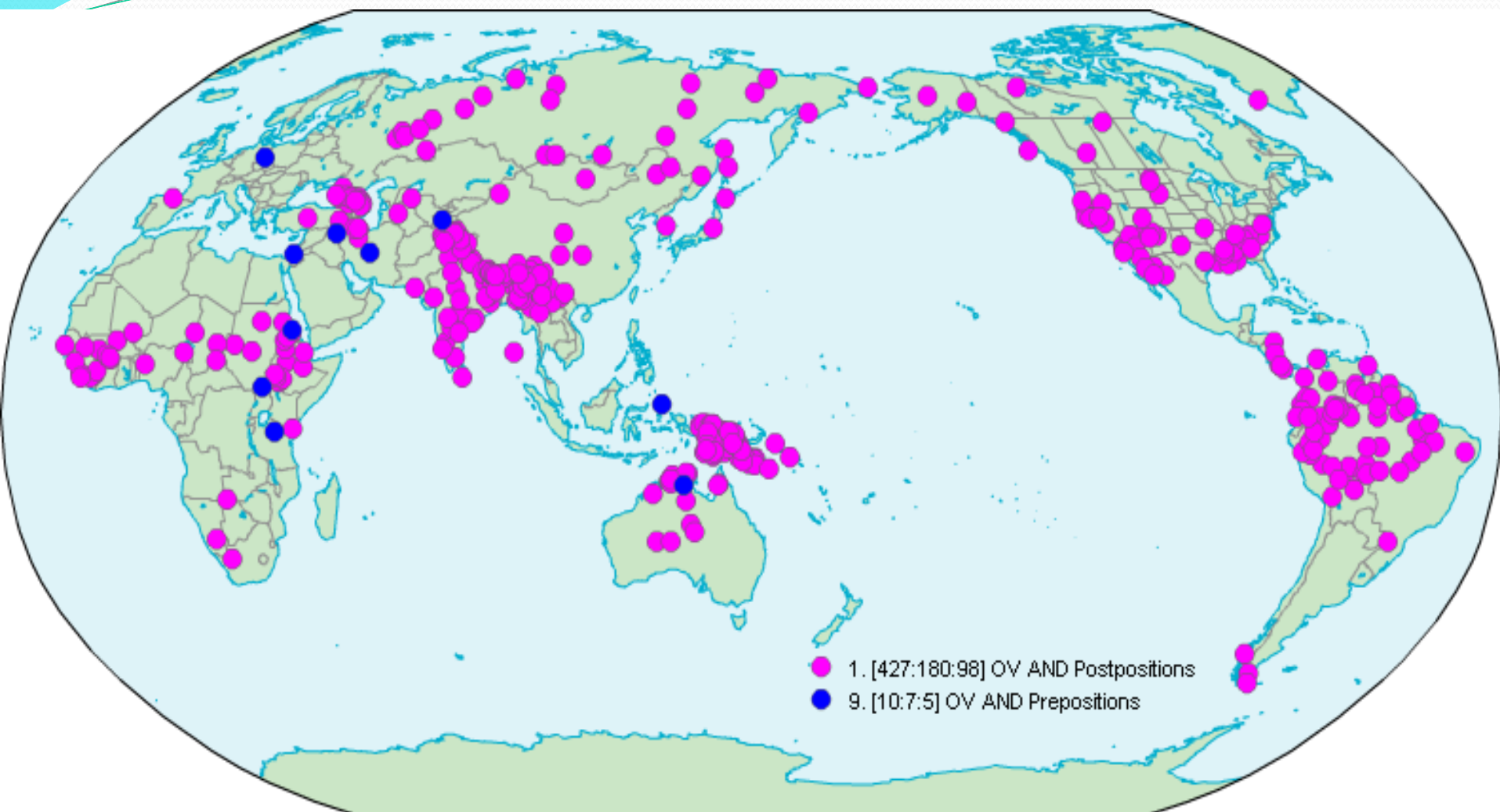
VO and Adpositions (Dryer 2005)



VO and Adpositions (Dryer 2005)



OV and Adpositions (Dryer 2005)

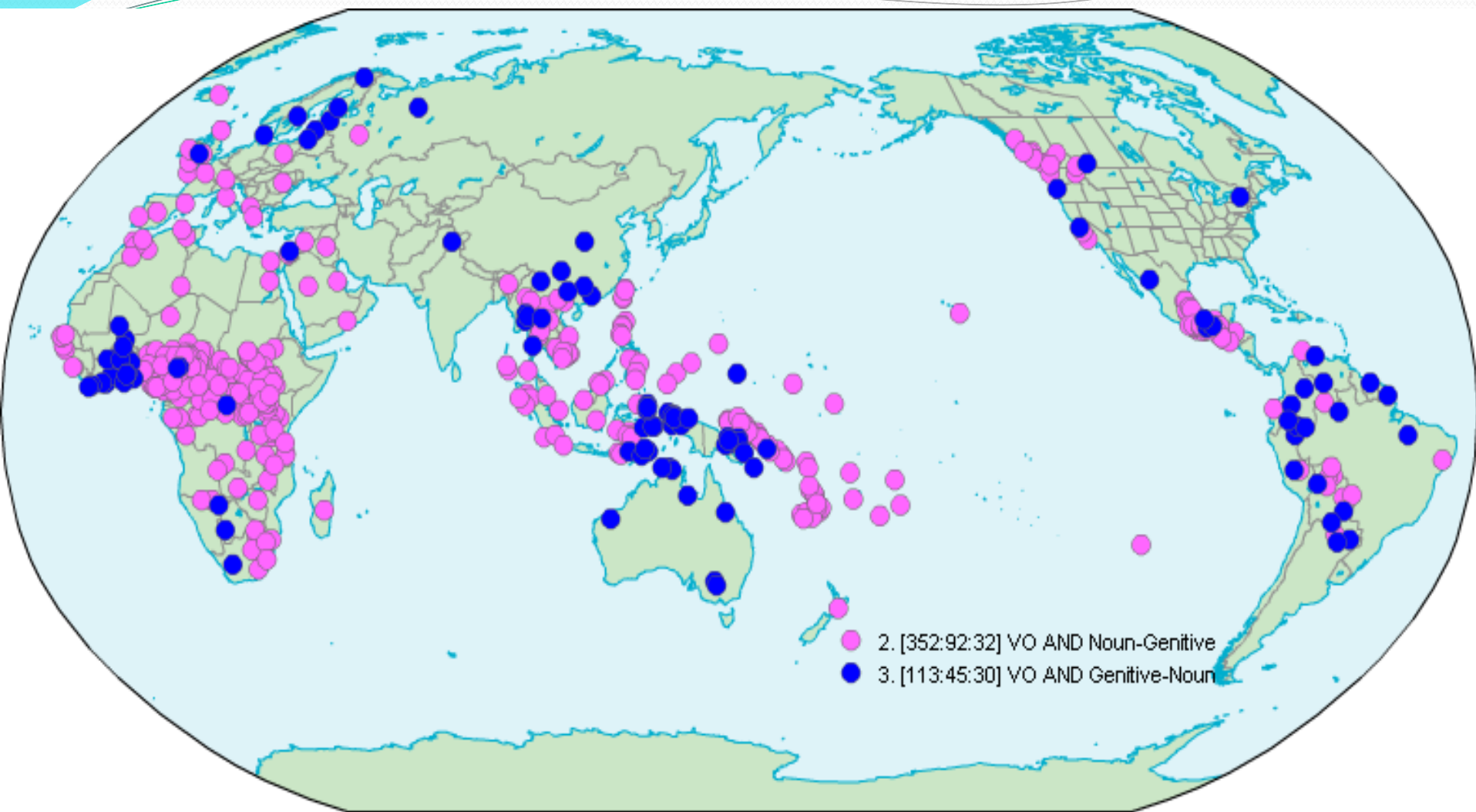


OV and Adpositions (Dryer 2005)

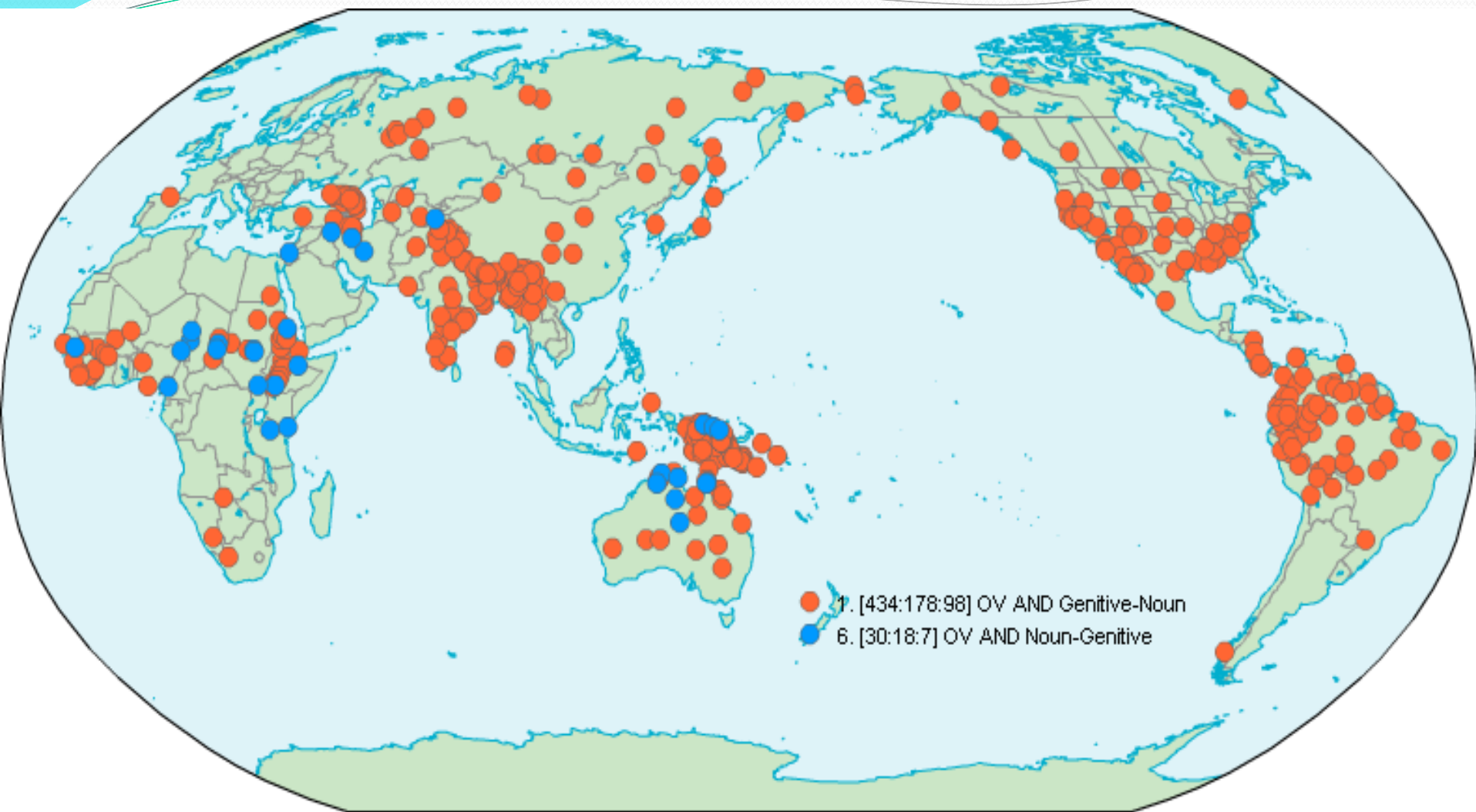
Genitive-noun order

(1) Meines Vaters Auto

(2) Das Auto meines Vaters



VO and Noun-Genitive (Dryer 2005)



OV and Genitive-Noun (Dryer 2005)

Word order correlations

VO

Preposition-Noun

Noun-Genitive

ART-N

AUX-V

SUB-Clause

N-REL

MAIN-ADV

COPULA-NP/ADJ

Sentence initial WH word

OV

Noun-Postposition

Genitive-Noun

N-ART

V-AUX

Clause-SUB

REL-N

ADV-MAIN

NP/ADJ-COPULA

Non-initial WH word

Word order correlations

English is a VO (or right-branching) language, but:

- it places the head after the dependent category in the Saxon genitive (e.g. Peter's car)
- it employs suffixes
- it has at least one postposition (= ago)

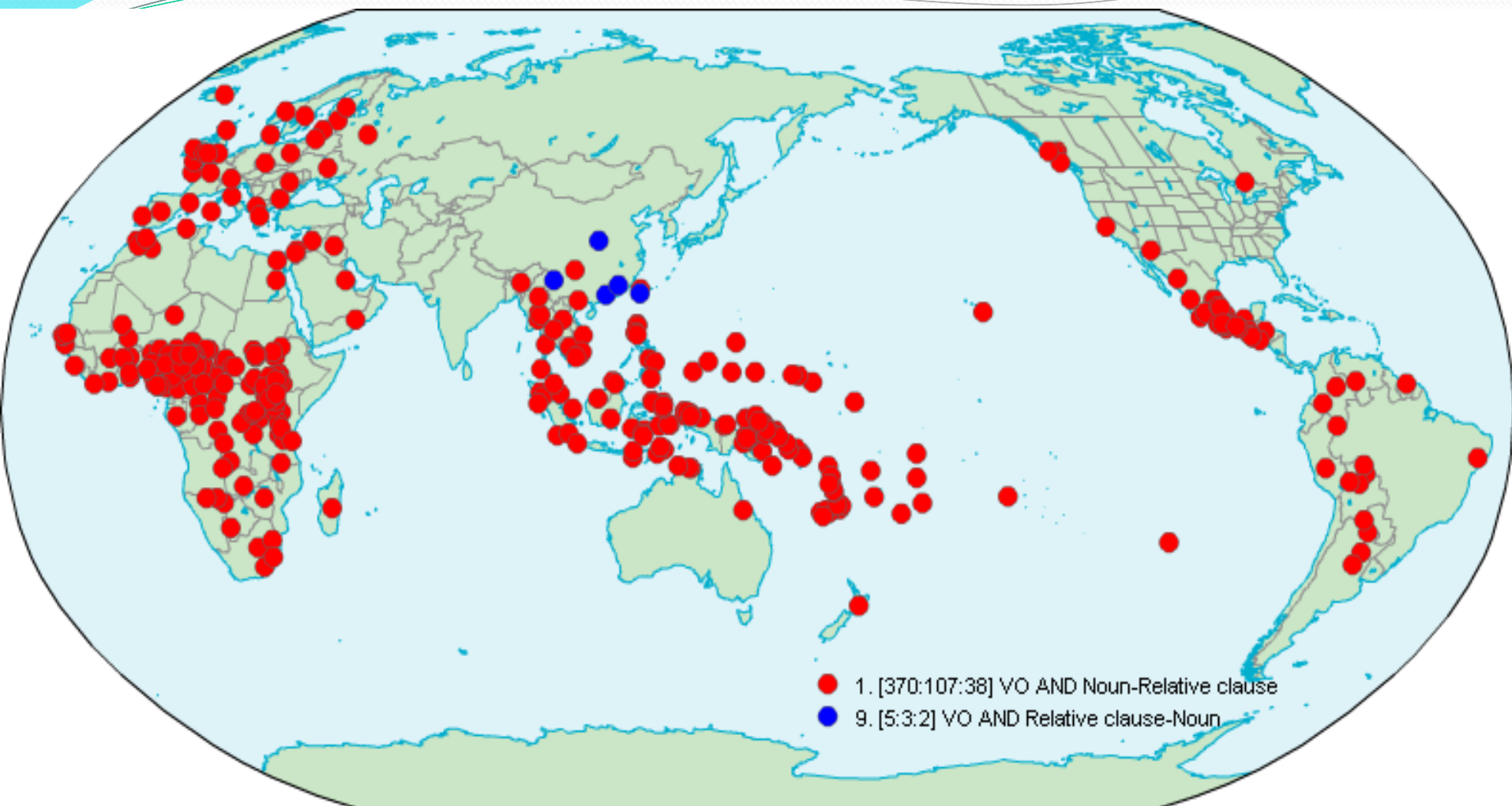


Implicational universals

Noun-Relative clause order

(1) English

The man [I met].



VO and Noun-Relative clause (Dryer 2005)

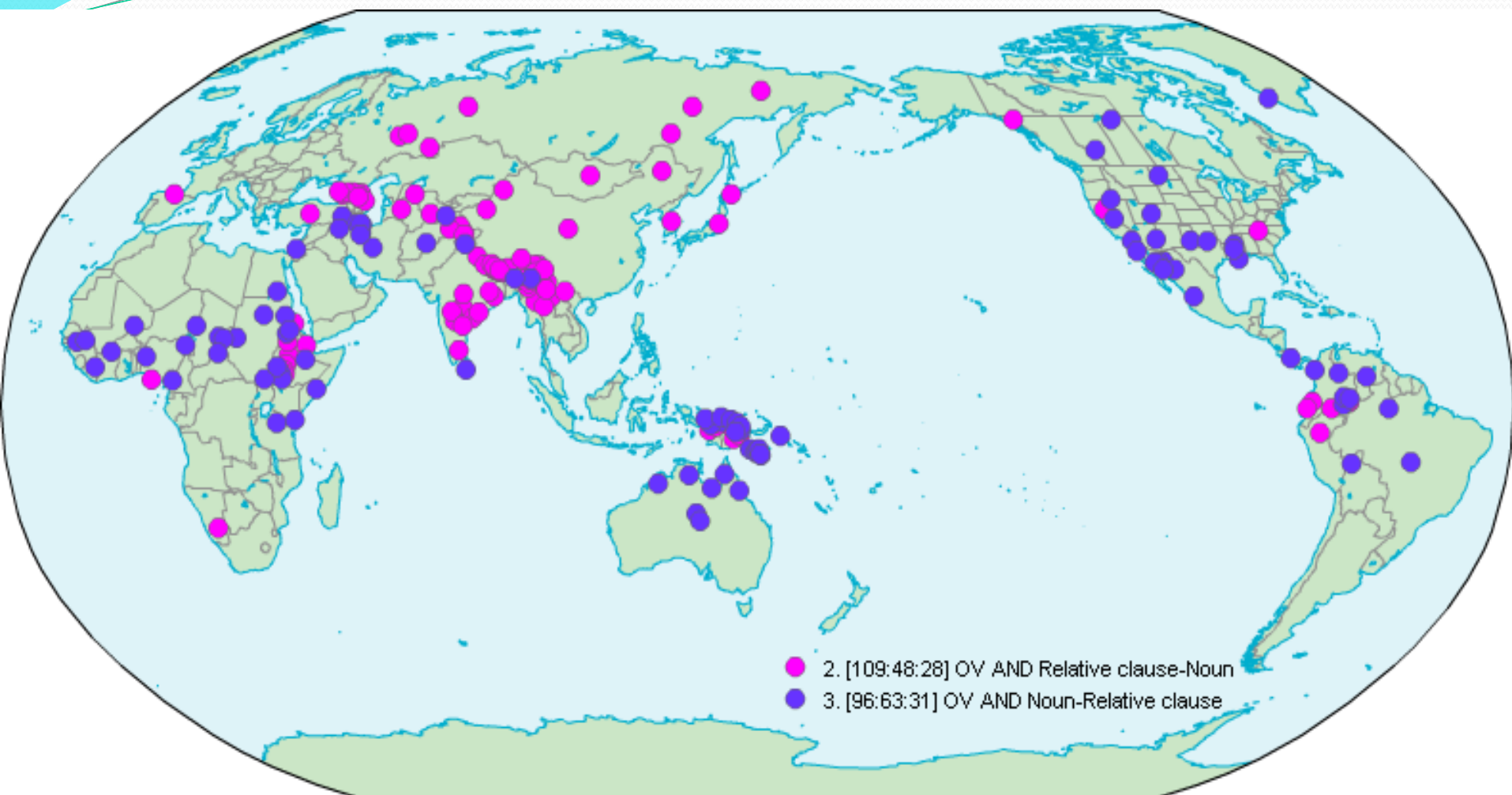
Noun-Relative clause order

(1) Japanese

[Maria ga kai-ta] **hon**

Maria SU write-PST book

‘The book that Mary wrote.’



OV and Noun-Relative clause (Dryer 2005)

Word order correlations

	VO	OV
N-REL	98.5	59.0
REL-N	1.5	41.0

If a language has basic VO order, the relative clause (almost) always follows the head noun.

Word order correlations

	VO	OV
GEN-N	32	90
N-GEN	68	10

If a language has basic OV order, the genitive almost always precedes the head noun.

Word order correlations

	VO	OV
Final SUB	1.5	69
Initial SUB	98.5	31

If a language has basic VO order, the subordinator almost always occurs at the beginning of the subordinate clause.



Non-implicational universals

Word order correlations

	VO	OV
Prepositions	85	6
Postpositions	15	94

If a language has basic VO order, it tends to employ prepositions, and if a language has basic OV order, it tends to employ postpositions.

Word order correlations

	VO	OV
AUX V	87.5	8
V AUX	12.5	92

If a language has basic VO order, it tends to place auxiliaries before the main verb, and if a language has basic OV order, it tends to place auxiliaries after the main verb.

Word order correlations

	VO	OV
ART N	71	40
N ART	28	60

If a language has basic VO order, it tends to place the article before the noun, and if it has OV order, it tends to place the article after the noun.

Explaining word order correlations

Implicational universals require an explanation in terms of competing motivations.

- We have to explain the symmetry in constituent order across languages, i.e. why are there word order correlations?
- We have to account for the exceptions, i.e. why do VO and OV languages do not pattern consistently?

Word order correlations

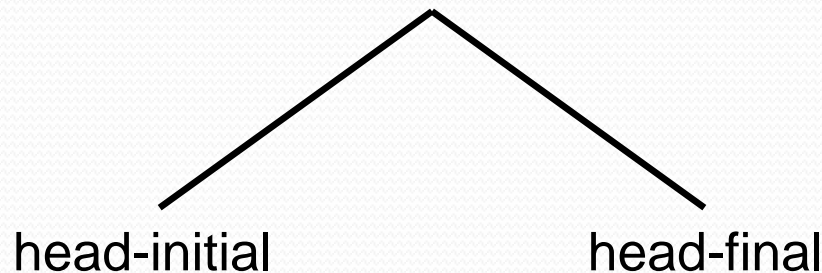
Cross-category harmony: Greenberg's word order correlations reflect a crosslinguistic tendency to place head and dependent in a consistent order.

[W. Lehmann 1972; Vennemann 1972]

Word order correlations

Cross-category harmony is based on the head-direction parameter.

[Frazier 1985]





Competing motivations for word order correlations

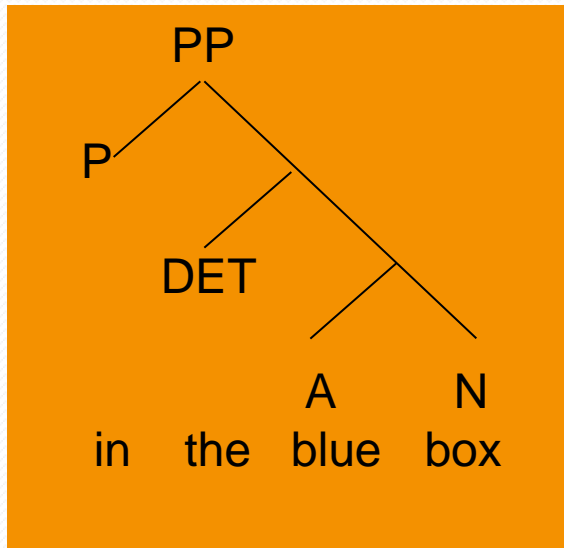
Word order correlations

Greenberg's word order correlations are motivated by processing.

Languages tend to be consistently right-branching or consistently left-branching rather than mixed left- and right-branching because languages with consistent branching directions are easier to process.

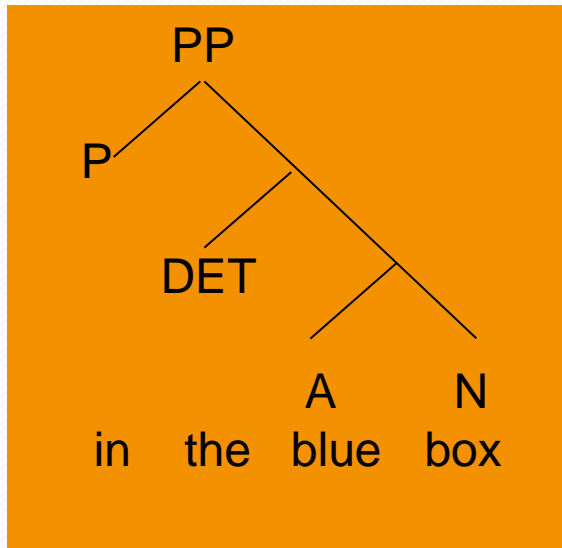
[Dryer 1992; Hawkins 1994, 2004]

Word order correlations

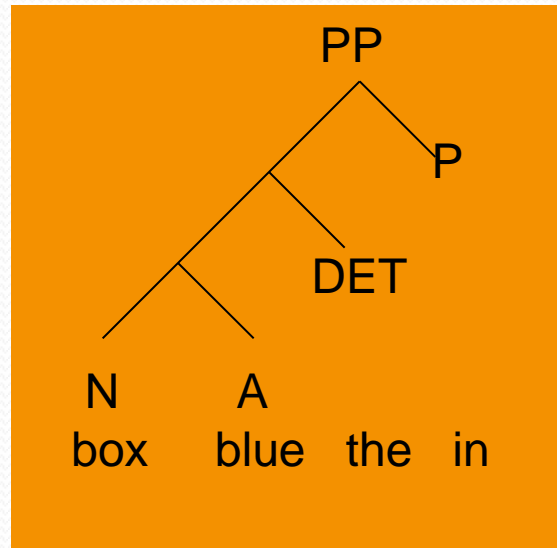


Right-branching

Word order correlations

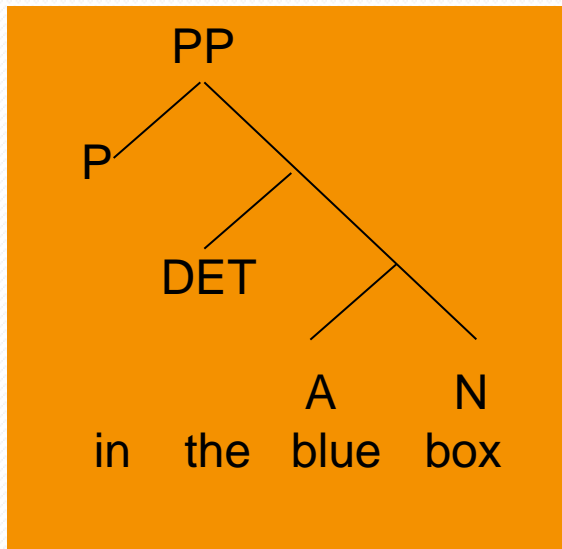


Right-branching

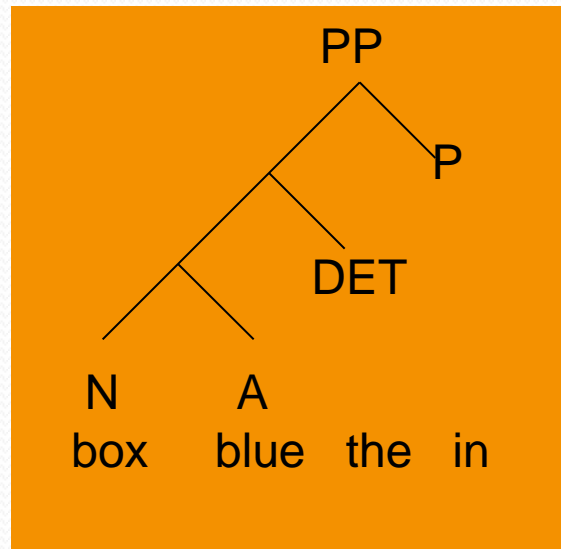


Left-branching

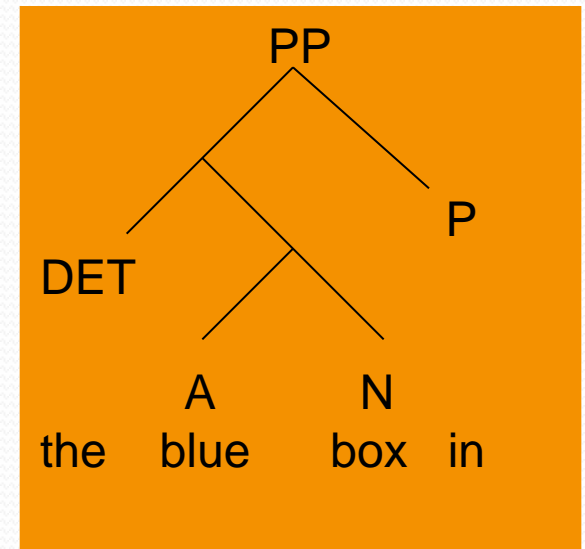
Word order correlations



Right-branching

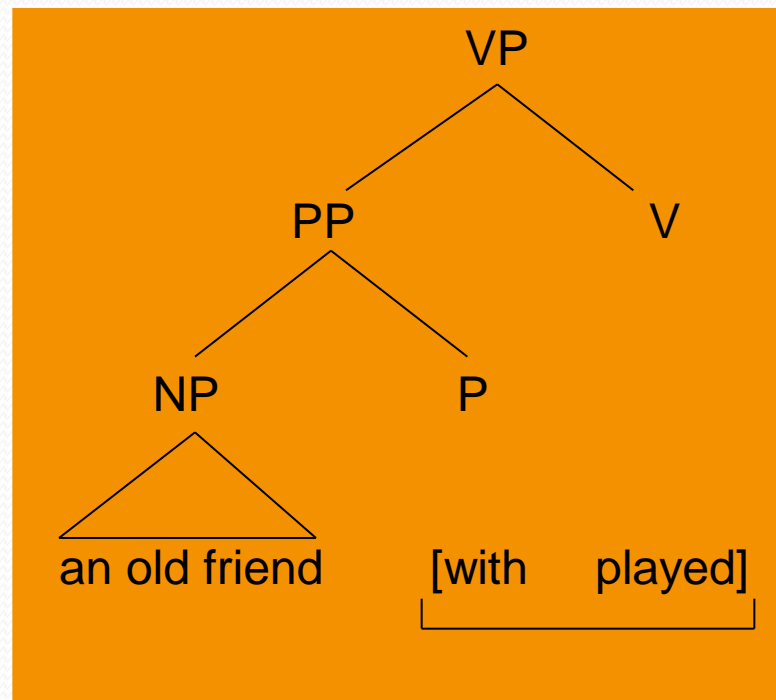
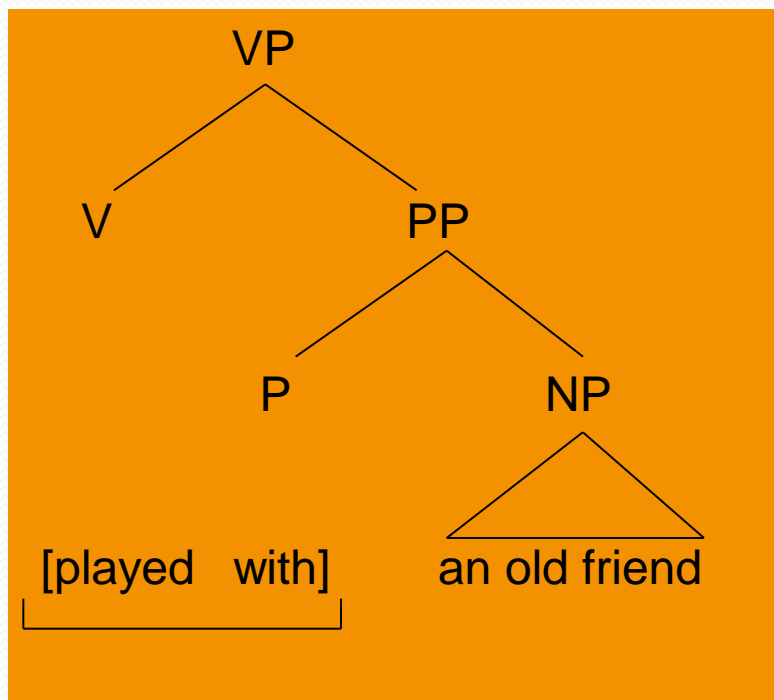


Left-branching

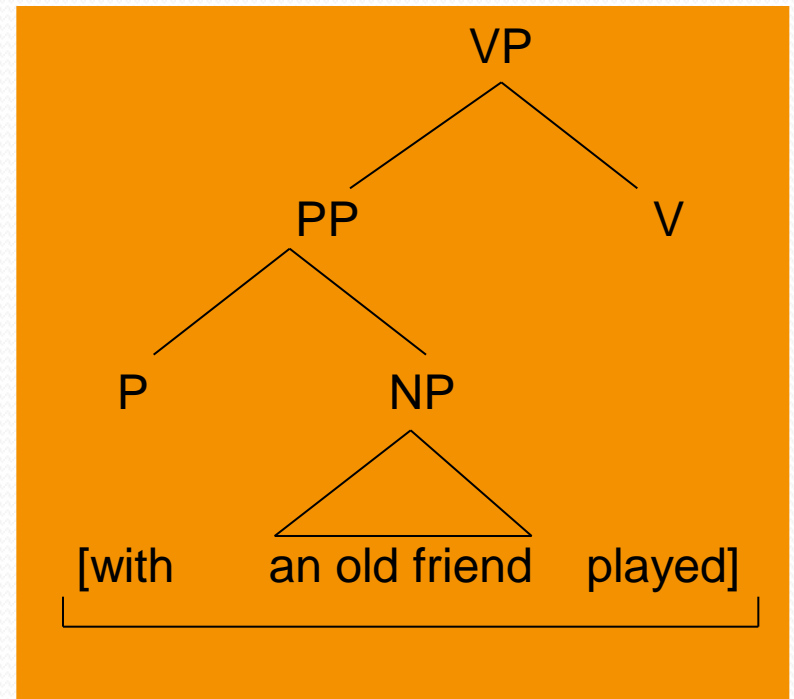
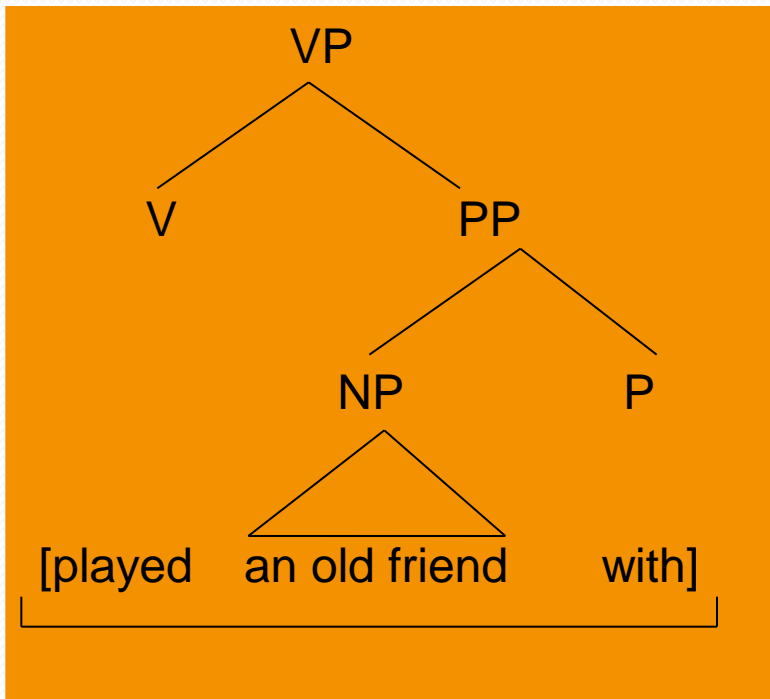


Mixed-branching

Processing PPs



Processing PPs



Skewed distributions

	VO	OV
N-REL	98.5	59.0
REL-N	1.5	41.0

How do we account for implicational universals?

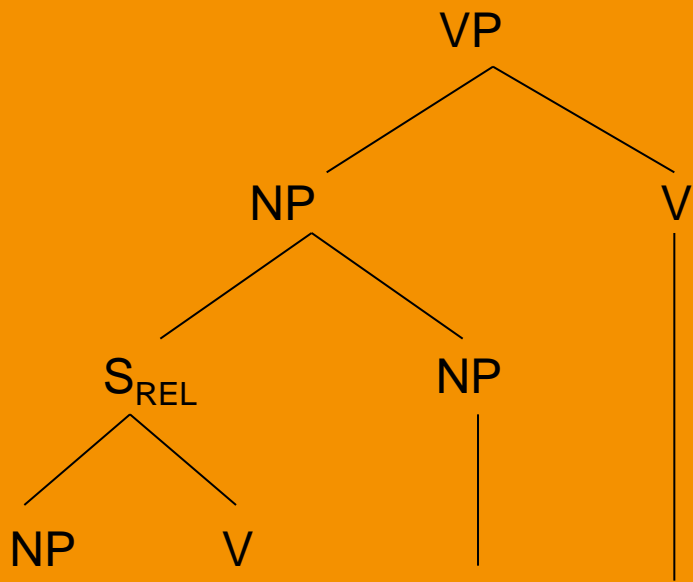
Competing motivations

Relative clauses involve a relationship between antecedent and (relative pronoun):

Der Mann, den du gesehen hast.

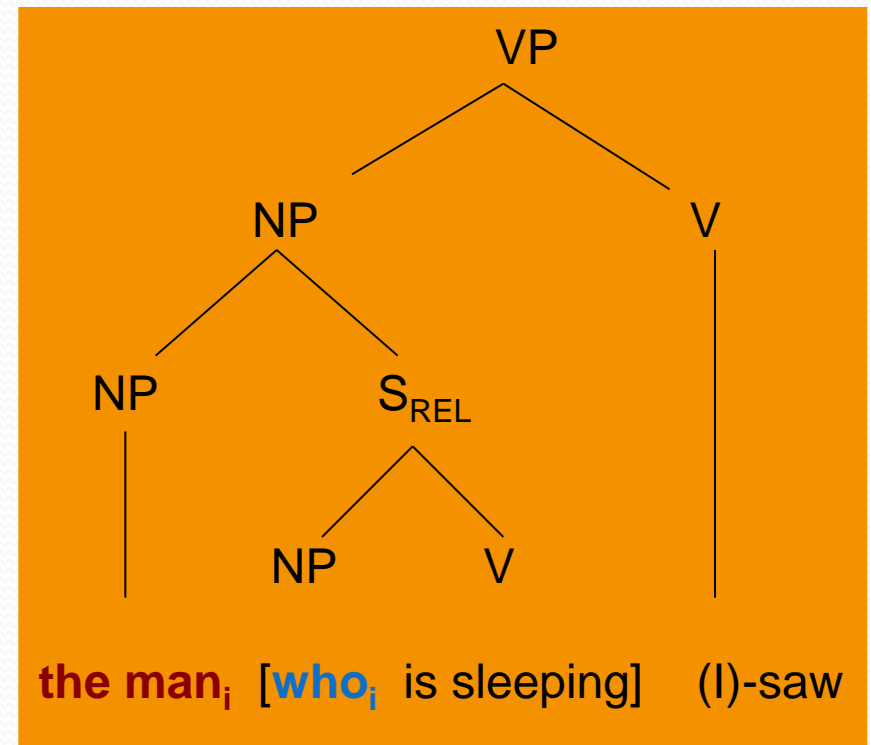
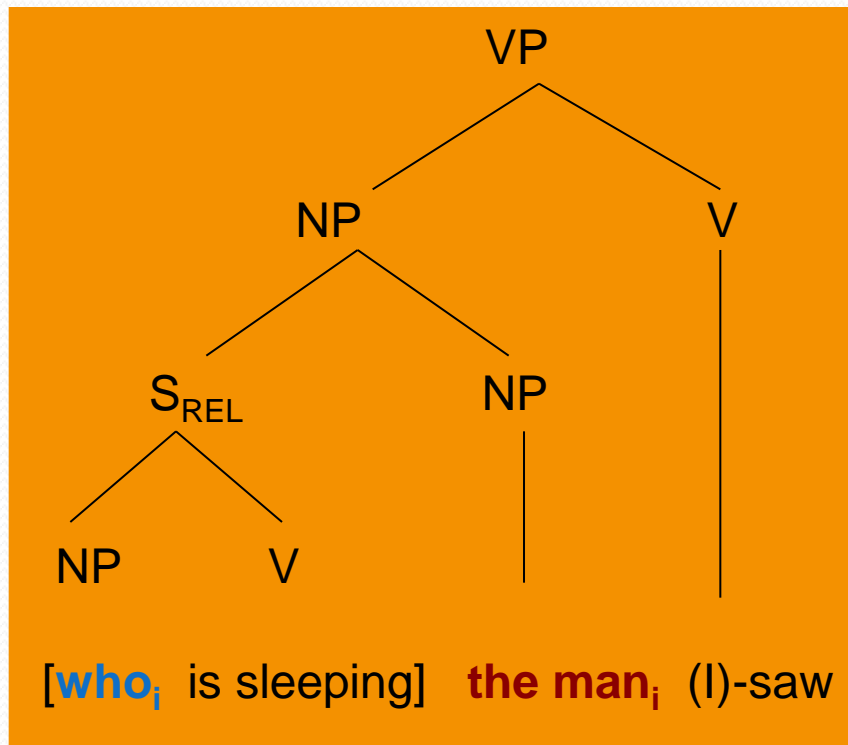
The man who you saw ____ .

Relative clauses



[who_i is sleeping] the man_i (I)-saw

Relative clauses



Competing motivations

- Head and dependent are easier to process if they are consistently ordered.
- Pronominal elements are easier to process if they follow their antecedent.