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# Syntactic diversity and language learnability 

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## Appendix

## Part 2: Parameter manifestations (used as questions for parameter setting)

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## FGM, $\pm$ grammaticalized morphology

Distinguishes languages that have words containing bound morphemes for grammatical meanings (e.g., IE, Uralic, Semitic, Japanese) from languages that do not (e.g., Mandarin, Cantonese)

## Manifestations

Is any of the following true in the language?
a) The language has affixes or regular phonological alternations that change the grammatical category of the base

```
ex: danger-dangerous
    sing-song
```

b) There are roots which take different affixes/phonological alternations encoding different closedclass interpretable/grammatical properties (tense, aspect, number, gender, gradation, case, etc.)

```
ex: cat-cats
```

sing-sang

## FGA, $\pm$ grammaticalized Agreement

Distinguishes languages that have distinct words agreeing in $\varphi$-features with each other (e.g., IE, Uralic, Semitic) from languages that do not (e.g., Mandarin, Cantonese, Japanese)

## Manifestations

Is any of the following true in the language?
There is at least one feature occurring on a word which must take its value ("agree with", "concord with") from another occurrence of the same feature on another word
ex: this cat - these/those cats

```
il.M.S gatto.M.S nero.M.S
'the black (tom)cat'
la.F.S gatta.F.S nera.F.S
'the black she-cat'
i.M.P gatti.M.P neri.M.P
'the black (tom)cats'
I like - she likes
tu.2S canti
'you sing'
voi. 2P cantate. 2P
'you-guys/y'all sing'
```

FGK, $\pm$ grammaticalized Case
Distinguishes languages that mark nouns, pronouns or determiners for morphological Case (e.g., English, German, Hungarian, Japanese) from languages that do not (e.g., Mandarin, Cantonese, Wolof)

## Manifestations

Is any of the following true in the language?
a) The morphology of personal or relative pronouns varies according to their syntactic role ex: I like the teacher the teacher likes me
b) The morphology of quantifiers, demonstratives, and/or definite/indefinite articles varies according to the syntactic role of the nominal minimally containing them
ex: der König traf die Gäste
GERMAN
'the king met the guests'
Ich habe den König getroffen
'I met the king'
c) The morphology of nouns varies according to their syntactic role
ex: $\quad o \beta \alpha \sigma \iota \lambda \iota \alpha ́ \varsigma ~ \varepsilon ́ \varphi v \gamma \varepsilon$
GREEK
'the king has left'
$\gamma \nu \omega ́ \rho ı \sigma \alpha$ тov $\beta \alpha \sigma \iota \lambda l \boldsymbol{\alpha}$
'I met the king'

## SPK, $\pm$ grammaticalized (ultra)spatial Cases

Distinguishes languages that mark nouns, pronouns or determiners for morphological Cases encoding spatial meanings in addition to simple Locative/Directional/Ablative (e.g., Hungarian, Finnish, Even, Evenki) from languages that do not (e.g., Russian, Latin, Arabic)

## Manifestations

Is any of the following true in the language?
There are spatial Case distinctions in addition to stative location, direction and source (e.g. adessive vs. inessive)

```
ex: a ház-on HUNGARIAN
    the house.SUPERESSIVE
    'on the house'
    a ház-ban
    the house.INESSIVE
    'in the house'
```

a ház-nál
the house.ADESSIVE
'at the house'

## FGP, $\pm$ grammaticalized Person

Distinguishes languages that express Person distinctions on categories other than pronouns (e.g. German, Hungarian, Hebrew) from languages that do not (e.g., Mandarin, Cantonese, Japanese)

## Manifestations

Is any of the following true in the language?
a) There is agreement in speech-role-designating morphology between a verb and some of its arguments, or an argument is doubled on the verb by a speech-role-sensitive clitic

## ex: I am leaving

you are leaving
Mary/she is leaving
b) There are overt expletive items in subject function
ex: it is summer
it is a pity that you have to leave
it seems that he has been arrested
c) There are overt resumptive items in (direct or indirect) object function

| ex: | a | Gianni | gli | hai | regalato | un | libro |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | ITALIAN

d) There are items that can occur as referentially independent pronouns and can also occur as a variable bound by a quantified antecedent like 'no-one'/'everyone'
ex: Mary likes him
everyone(i) believes that Mary loves him(i)
e) Speech-role-designating items precede adjectives (applies to adjectives and numerals obligatorily preceding nouns)
ex: some young scholars participated in the project.
we young are all influencers now.

| $a$ | krizis | aggaszt-ott-a | $a$ | magyar |
| :--- | :--- | :--- | :--- | :--- | | embere-ek-et |
| :--- |
| the crisis | made-anxious-PAST.DEF $\quad$ the $\quad$ Hungarian | people-P-ACC |
| :--- |
| 'the crisis made Hungarian people anxious' |

f) There is no article in the language, but nominal arguments with a cardinal numeral following a possessive, an adjective meaning 'other', 'same/even' or 'unique', or the noun itself receive definite interpretation
ex: moje trzy ksiaqżki
POLISH
my three books = only definite interpretation (Rutkowski 2007)
trzy moje książki
three my books = indefinite interpretation (Rutkowski 2007)
g) There are speech-role-designating morphemes alternating between a stressed and a clitic form
ex: Claudio lo odia
'Claudio hates him'
Claudio odia lui
‘Claudio hates him (contrastive)'
h) Common nouns in non-argument function can occur bare, while the same nouns in argument function require the addition of some overt functional category
NEGATIVE EVIDENCE
ex: Ronald Reagan was President of the United States from 1981 to 1989
the President of the United States met with survivors of another deadly school shooting

* president of the United States met with survivors of another deadly school shooting
si finge dottore
ITALIAN
self fakes doctor
'He pretends to be [a] doctor'
il/un/quel dottore è scomparso
'The/A/That doctor has disappeared'
* Dottore è scomparso
i) Proper names in non-argument function can occur bare, while the same proper names in subject function require the addition of some overt functional category
NEGATIVE EVIDENCE
ex: si comportano da Juventus
'They act as Juventus'
la Juventus è insopportabile
'Juventus is unbearable’
*Juventus è insopportabile
j) Nominal arguments with understood maximality denotation (definiteness) are marked by a dedicated overt category (typically the 'definite article', or some other source of definiteness, e.g. demonstratives, genitives/possessives)
ex: I met a family. The children were very nice. (*Children were very nice.)
I took a taxi. The driver was drunk. (*Driver was drunk)


## FSP, $\pm$ semantic Person

Distinguishes languages that express Person distinctions on pronouns (personal, reflexives) (e.g., Mandarin, Cantonese) from languages that do not (e.g., Japanese)

## Manifestations

Is any of the following true in the language?
a) There is agreement in speech-role between a reflexive and its antecedent

```
ex: wo chaoyue-le wo-ziji
MANDARIN
I outdo-Perf I-self
I outdid myself'
ni chaoyue-le ni-ziji
you outdo-Perf you-self
'you outdid yourself'
Mali chaoyue-le ta-ziji
Mary outdo-Perf her-self
'Mary outdid herself'
```

b) There is a system of personal pronouns single-membered per each speech-role, with a formal relation between singular and plural at least for some speech-roles

```
ex: wo, ni, ta
    'I, thou, s/he/it'
    wo-men, ni-men, ta-men
    I.COLL, thou.COLL, s/he/it.COLL
    'we, you guys, they'
```


## FGN, $\pm$ grammaticalized Number

Distinguishes languages that obligatorily express at least singular/plural distinctions in nominal phrases (e.g., English, Finnish, Hebrew) from languages that do not (e.g., Mandarin, Cantonese, Japanese)

## Manifestations

Is any of the following true in the language?
a) Nominal arguments display bound morpheme alternations (on the head noun or a definite article/demonstrative/quantifier/adjective) which oppose singular to non-singular interpretation
ex: il gatto (miagola)
ITALIAN
the.M.S cat.M.S meow.3S
'the cat (meows)'
i gatti (miagolano)
the.M.P cat.M.P meow.3P
'cats (meow)'
b) There is agreement in number between a singular/non-singular nominal argument and the verb
ex: il gatto miagola
ITALIAN the.M.S cat.M.S meow.3S
'the cat meows'
i gatti miagolano
the.M.P cat.M.P meow.3P
'cats meow'
c) There is agreement in number between a singular/non-singular noun (or a definite article/demonstrative/quantifier) and adjectives (within one and the same nominal structure)
ex: il gatto bianco
ITALIAN
the.M.S cat.M.S white.M.S
'the white cat'
i gatti bianchi
the.M.P cat.M.P white.M.P
'the white cats'
d) There is agreement in number between a 3rd person reflexive and its antecedent
ex: the boy likes himself
the boys like themselves

## SCO, $\pm$ spread collective Number

Distinguishes languages that have agreeing morphology on nouns and their modifiers that is optionally used to express collective reading (e.g., Kuikuro) from languages that do not (e.g., Japanese)

## Manifestations

Is any of the following true in the language?
An argument collective nominal bears an overt marker for 'collective number' on the noun and its modifiers

```
ex: itão-ko itütü-ko
KUIKURO
woman-COLL.P nice-COLL.P
'nice women'
itão-ko hesini-ko
ugly-COLL.P
'ugly women'
```


## GDP, $\pm$ grammaticalized distributive plurality

Distinguishes languages that systematically mark distributive interpretation with a morpheme on both the distributed and the quantified nominal argument (e.g., Korean) from languages that do not (e.g., Japanese)

## Manifestations

Is any of the following true in the language?
In sentences containing an argument distributed over by another quantifying argument, there is a morpheme which functions as a marker of this distributive reading occurring both on the quantified and on the quantifying nominal
ex: haksayng-(tul)-i phwungsen hana-lul sa-ss-ta
KOREAN
student-GROUP.MARK-NOM balloon one-ACC buy-PAST-DECL
'the students bought a balloon'
haksayng-tul*-i phwungsen hana-lul-tul** sa-ss-ta
student-GROUP.MARK-NOM balloon one-ACC-PL buy-PAST-DECL
'the students bought a balloon each.'
*Obligatory as antecedent of the second occurrence.
**Locally bound (obeys Principle A). Goes after the case morpheme when it is spread.

## FSN, $\pm$ number spread to $\mathbf{N}$

Distinguishes languages that exhibit at least some instances of number morphology on nouns and not only on determiners (e.g., French, English, Italian) from languages that do not (e.g., Basque, Wolof)

## Manifestations

Is any of the following true in the language?
a) There are nouns that bear variable number morphology
ex: il gatto miagola
the.M.S cat.M.S meow.3S
'the cat meows'
i gatti miagolano
the.M.P cat.M.P meow.3P
'cats meow'
b) There are bare nouns in (at least some) argument function
ex: ho bevuto acqua
ITALIAN
'I drank water'
ho incontrato studenti per tutto il giorno
'I have been meeting students all day long'

## FNN, $\pm$ number on $\mathbf{N}$

Distinguishes languages that have systematic exponence of number morphology on nouns (e.g., English, Italian) from languages that do not (e.g, French)

## Manifestations

Is any of the following true in the language?
a) There is systematic exponence of number morphology distinguishing singular vs. plural number on nouns, not definable as a lexical/phonological idiosyncrasy
ex: cat - cats
gato - gatos
SPANISH
gatto - gatti
ITALIAN
b) There are bare nouns in (at least some) argument function
ex: ho bevuto acqua
ITALIAN
'I drank water'
ho incontrato studenti per tutto il giorno
'I have been meeting students all day long'

## FGT, $\pm$ grammaticalized temporality

Distinguishes languages that systematically express whether the property denoted by a noun holds/no longer holds/does not hold yet at the speech time through a bound morpheme in the nominal (e.g., Kuikuro) from languages that do not (e.g., IE, Uralic, Semitic, Basque)

## Manifestations

Is any of the following true in the language?

Nouns referring to natural kinds (animals, people, plants, ...) and material objects take a bound morpheme signaling that the property they denote is not true at the speech time even when a verb or adjective in the sentence already expresses the state-changing effect (through time) on the denotatum
ex: oku-pe atsunkgili-pügü leha
KUIKURO
porridge-‘ex’ spoil-PRF CMPL
'the (rotten) porridge is spoiled'
kagaiha heke kangamuke-pe e-lü
white ERG child-‘ex’ kill-PNCT
'the white man killed the (dead) child' (Franchetto \& Thomas 2016)

FGG, $\pm$ grammaticalized gender
Distinguishes languages that exhibit at least some agreement in gender between a noun and a determiner or modifier (e.g., French, Italian, Wolof) from languages that do not (e.g., English, Uralic, Altaic)

## Manifestations

Is any of the following true in the language?
a) There is agreement in gender/noun class between nouns and articles/demonstratives/quantifiers

```
ex: il cucchiaio, questo cucchiaio, un cucchiaio
    the.M.S spoon.M.S, this.M.S spoon.M.S, a.M spoon.M.S
    la forchetta, questa forchetta, una forchetta
    the.F.S fork.F.S, this.F.S fork, a.F.S fork.F.S
```

b) There is agreement in gender/noun class between nouns and NP-modifying adjectives

```
ex: il cucchiaio pulito
    the.M.S spoon.M.S clean.M.S
    'the clean spoon'
    la forchetta pulita
    the.F.S fork.F.S clean.F.S
    'the clean fork'
```


## FSG, $\pm$ semantic gender

Distinguishes languages that contrast at least two 3rd person pronouns encoding animacy and/or perceived biological sex (e.g., English) from languages that do not (e.g., Finnish, Hungarian, Turkish, Even, Wolof)

## Manifestations

Is any of the following true in the language?

There is some overt distinction between 3rd person pronominal forms encoding differences in sex/animacy
ex: everybody likes the king: he is really nice everybody likes the queen: she is really nice everybody likes this book: it is really interesting

## CGB, $\pm$ unbounded singular nouns

Distinguishes languages that have singular (or number-neutral, in languages without grammaticalized number) count bare nouns with an unbounded reading, i.e. indefinite, scopeless, atelic in incorporated object position (e.g., Hungarian, Turkish, Hindi) from languages that do not (e.g., Russian, Icelandic, Celtic, Hebrew)

## Manifestations

Is any of the following true in the language?
a) In a language with grammaticalized number, bare singular count nouns in the object position of an atelic predicate have an indefinite number-neutral reading

```
ex: gyerek-ek alma-t szed-nek
    child-P apple-S-ACC pick-INDEF.3P
    'the children are picking apples (=apple-picking)' (Kenesei et al 1998: 330)
```

A: John enna velai seigiraan? TAMIL John what work does
B: avan seerundhu virkindraan he car sells 'He sells cars'
anu puure din cuuhaapakaRtii rahii HINDI
Anu whole day mouse kept-catching
'Anu kept catching mice (different ones) the whole day'
(Dayal 2009)
b) In a language without grammaticalized number, in subject position bare nouns have a definite reading, while nouns introduced by a further dedicated morpheme occur with an indefinite, non presuppositional (one of the...), non-numeral ('exactly one...') reading

| ex: gau soeng gwo maalou |  |
| :--- | :--- | :--- | :--- |
| dog want cross road |  |
| 'the dog wants to cross the road' | MANDARIN |
| (cannot mean: 'A dog wants to cross the road') |  |
| you $\quad$ gau soeng gwo maalou |  |
| INDEF $\quad$ dog want cross road |  |
| 'a dog/some dogs want(s) to cross the road' |  |

c) Bare singular count nouns in subject position have a definite reading, while singular count nouns introduced by a further dedicated morpheme have an indefinite, non-specific, non presuppositional (one of the...), non-numeral ('exactly one...') reading
puure din kamre meN cuuhaaghustaa rahaa HINDI
whole day room in mouse kept-entering
'the whole day the mouse/a certain mouse (the same one) kept entering the room' (Dayal 2009)
roj roj kamre meN ek cuuhaaghustaa rahaa
daily daily room in one mouse kept-entering
'every day there was a mouse (a potentially different one) that kept entering the room'

## FPC, $\pm$ grammaticalized perception

Distinguishes languages in which all nouns have an unbounded reading (like that of English existential bare plurals) whenever they are not accompanied by a morpheme functioning like English articles but encoding contrasts about the perceived position of the denotatum (e.g., Kadiweu) from languages that do not (e.g., IE, Uralic, Semitic, Japanese, Basque)

## Manifestations

Is any of the following true in the language?
The language has a functional morpheme (other than demonstratives) that attaches to arguments and encodes the speaker's perception of the position or movement of a nominal argument's referent, and whose absence results in an unbounded reading of the nominal

| ex: | João yaa i-jo apolikaGana-Ga | KADIWEU |
| :--- | :--- | :--- | :--- |
| João 3-buy M-PERC horse-NOMINALIZER |  |  |
| 'João buys a/the horse' (perceived as moving away from the speaker) |  |  |
| João yaa i apolikaGana-Ga |  |  |
| João 3-buy M horse-NOMINALIZER |  |  |
| 'João buys (one or more) horses' |  |  |
| i-d:i $\quad$ ninyoGo-di |  |  |
| M-PERC water-NOMINALIZER |  |  |
| 'a/the (unit of) water' (in a horizontally extended container/layer/vessel) |  |  |
| (from Sandalo \& Michelioudakis 2016: 7-8) |  |  |

## DGR, $\pm$ grammaticalized Specified Quantity

Distinguishes languages that obligatorily encode whether a nominal argument is definite, i.e. maximal in the domain of discourse, (e.g. English, German, Italian, French, Irish, Welsh, Classical Greek, Standard Greek, Hebrew, Arabic) from languages that do not (e.g., Polish, Russian, Hindi)

## Manifestations

Is any of the following true in the language?
a) There is an overt marker for nominal arguments with a definite interpretation (= with maximal reading) denoting entities introduced in the domain of discourse but not directly mentioned, which is absent from those with non-maximal readings
ex: I met a few families. The children were well-behaved.
(as opposed to: Some children were well-behaved. A child was well-behaved.)
I took a taxi. The driver was drunk. (as opposed to: A driver was drunk.)
b) Argument common nouns denoting a maximal specific entity considered unique by the speaker and the hearer (hence with definite interpretation) bear an overt marker that is different from those present when such an entity is not considered unique
ex: I met the mayor
(as opposed to: at the meeting I interviewed a mayor)
the sun is the center of our solar system
(as opposed to: I saw a wonderful sun today)
c) Argument nominals headed by a singular count noun and referring to the whole kind named by that noun bear an overt marker that is different from the one used with nonmaximal readings
ex: the dodo is extinct
(as opposed to: I saw a dodo)
d) Argument nominals headed by a mass/plural noun and referring to the whole kind named by that noun bear a dedicated marker that is different from the one used with non-maximal readings
ex: i dinosauri sono estinti
the.M.P dinosaur.M.P be.3P extinct.M.P
'Dinosaurs are extinct'
(as opposed to:
*Dinosauri sono estinti, *Dei dinosauri sono estinti
Quel pittore dipinge dinosauri
that.M.S painter.S paint.3S dinosaur.M.P
'That painter paints dinosaurs')
l'acqua fa bene
ITALIAN
the.F.S water.F.S do. 3 S well
'Water is healthy'
(as opposed to:
*Acqua fa bene, *Un'acqua fa bene, *Dell'acqua fa bene

| Bere (un'/dell') | acqua povera | di | sodio ti farebbe bene |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | drink a.F. water.F.S poor.F.S of sodium 2S.ACC.CL do.3S well 'It would be healthy for you to drink a water with little sodium'

## DGP, $\pm$ grammaticalized text anaphora

Distinguishes languages that obligatorily encode a noun's previous mention in the discourse through a dedicated morpheme (probably Gothic, Mauritian Creole, Archi) from languages that do not (e.g., Latin, Russian, Hindi, Mandarin, Japanese)

## Manifestations

Is any of the following true in the language?
A noun denoting an entity that has been mentioned in the previous context ('anaphoric reading') bears a dedicated marker (other than a demonstrative)


## CGR, $\pm$ weak Specified Quantity

Distinguishes languages that freely admit bare singular count indefinite arguments (e.g., Icelandic, Celtic, Semitic, Classical Greek) from languages that obligatorily mark a singular count indefinite argument through a dedicated morpheme (e.g., Romance, English, German, Mainland Scandinavian, Standard Greek)

## Manifestations

Is any of the following true in the language?
a) Bare singular count nouns with an indefinite reading are grammatical in subject position
ex: kelev nashax oti
HEBREW
dog bit ECM-me 'a dog bit me'
b) Bare nominal arguments containing a definite genitive not occurring at their boundary have a definite interpretation
ex: lausn Péturs á vandamálinu ICELANDIC
solution Pétur-GEN of problem-the
'Pétur's solution of the problem' (Sigurðsson 2006: §2.4 ex. 7)

| disgrifiad cywir $\quad y \quad$ ddamwain | WELSH |
| :--- | :--- | :--- | :--- |
| description accurate the accident |  |
| 'the accurate description of the accident'(adapted from Rouveret 1994) |  |

c) There are bare nominal arguments containing a demonstrative not occurring at their boundary
ex: more ze shel ha-yeled HEBREW
teacherthis of the-boy
'this teacher of the boy'
d) It is possible for a noun with a definiteness morpheme affixed to it to occur in a nonboundary position of an argument nominal that does not contain any other overt definite category at its boundary

| ex: | rauðu | bcekur-nar um Napóleon | ICELANDIC |
| :--- | :--- | :--- | :--- | :--- |
| red books-the about Napoleon |  |  |  |
|  | 'the red books about Napoleon' (adapted from Sigurðsson 2006) |  |  |

NWD, $\pm$ weak Person
Distinguishes languages in which nominal arguments headed by proper names and kind names can occur bare (e.g., English, German, Wolof) from languages that always fill the determiner position with the proper name itself or an article (e.g., Italian, Spanish, French, Basque)

## Manifestations

Is any of the following true in the language?
a) Bare argument proper names can follow an adjective
ex: ancient Rome was a powerful city
b) Bare plural/mass argument nouns can occur as kind-referring:
ex: dinosaurs are extinct
Mme Curie discovered radium
c) Bare unmodified plural/mass nouns may occur as preverbal subjects with existential interpretation:
ex: dogs were everywhere
water was leaking out
d) Bare unmodified plural/mass nouns may occur as subjects with generic interpretation:
ex: dogs are dangerous
water is the best thing to drink to stay hydrated
e) Bare nominal arguments containing a prenominal genitive non-agreeing in phi-features with the head noun can have a definite specific interpretation
ex: John's bike ( $\neq$ a bike of John's)
f) There are definite affixes on non-initial constituents of bare argument nominals
ex: stóra bók-in
ICELANDIC
large book-the
'the large book'
g) Possessives occur without a determiner in argument phrases with no nominal head
ex: mine is better
h) There are different inflections of attributive adjectives depending on different choices of the determiner
ex: ein gutes Buch
GERMAN
'a good book'
das gute Buch
'the good book'

FVP, $\pm$ variable person
Distinguishes languages in which nominal phrases with Person-unmarked articles (or demonstratives) can denote first and second person entities (e.g., Spanish, Standard Greek) from languages that cannot, and use a personal pronoun in such cases (e.g., English, Italian)

## Manifestations

Is any of the following true in the language?
a) A nominal argument non-overtly marked as 1 st/2nd person in subject position can control 1st/2nd person verb agreement

| ex: las/algunas mujeres estamos | cansadas |
| :--- | :--- | :--- | :--- | :--- |
| the/some women are-1P |  |
| 'we women/some of us women are tired' |  |

b) A nominal non-overtly marked as 1 st/2nd person occurring in topic position can be resumed by a $1 \mathrm{st} / 2$ nd person pronoun

| ex: | $a$ | los hombres | siempre | nos | gusta exagerar | SPANISH |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | to the men | always | to-us | pleases exaggerate |  |  |
|  | 'we men always like to exaggerate' |  |  |  |  |  |

## DGD,$\pm$ grammaticalized distality

Distinguishes languages that must always specify whether the definite denotatum of a nominal is regarded as proximate or distal in space and time through different forms of their article (e.g., Wolof, western Basque) from languages that only have a deictically neutral article (e.g., English, German, Spanish)

## Manifestations

Is any of the following true in the language?
There are different articles marking a distinction between proximate vs. non-proximate (in time or space), different from determiners encoding deictic/discourse-anaphoric features (e.g. demonstratives)
ex: Gótik yi yàq nañu Rome b-u jëkk b-a WOLOF Goths CL.P destroy3P.PERF Rome C-REL ancientCL-DEF.DIST 'the Goths destroyed ancient Rome'

```
Rom-u tey b-i
Rome-of today CL-DEF.DIST
```

'contemporary Rome'
gizon-ak W. BASQUE
man-ART.P
'the men'
gizon-ok
man-ART.P.PROX
'we men', 'you men', 'the men here’ (from Trask 2003: 122)

## DPQ, $\pm$ free null partitive $\mathbf{Q}$

Distinguishes languages that, in affirmative sentences, use Case or an adposition to contrast two semantic types of bare complements (singular, plural or mass) - one denoting a subpart (some stages) of the denotatum of the head noun, the other denoting the whole entity - (e.g., Finnish) from languages that have only one form for these two interpretations (e.g., English, Italian)

## Manifestations

Is any of the following true in the language?
There are special Case/adposition alternations with bare nominals in argument function such that one such Case/adposition assigns a partitive indefinite meaning

```
ex: lu-i-n kirja-n
read-PST-1S book-GEN/ACC
'I read the/a book'
lu-i-n kirja-a
read-PST-1S book-PART
'I read a little (=a non-specified amount) of the/a book'
lu-i-n kirja-t
read-PST-1S book-P.NOM/ACC
'I read the books'
lu-i-n kirjo-j-a
read-PST-1S book-P-PART
'I read (a non-specified amount of) books'
```

FINNISH

## DCN, $\pm$ article-checking $\mathbf{N}$

Distinguishes languages that have a definite article affixed to the head noun or to the first adjective of the nominal phrase (e.g., Romanian, Bulgarian, Scandinavian) from languages in which the definite article is a free morpheme occurring before or after the whole noun phrase (e.g., the rest of Romance, the rest of Germanic, Celtic, Basque)

## Manifestations

Is any of the following true in the language?
a) There is a non-phrase-final morpheme suffixed to the head noun and functioning as the only marker of the definite reading of the whole nominal phrase

| ex: | pro-chetox | kniga-ta | $z a$ | Napoleon | BULGARIAN |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | read.1.PAST.PERF | book-the | about | Napoleon |  |
|  | 'I read the book on Napoleon' |  |  |  |  |

b) there is a non-phrase-final morpheme suffixed to an attributive adjective and functioning as the only marker of the definite reading of the whole nominal phrase

| ex: | pro-chetox | nova-ta | kniga |
| :--- | :--- | :--- | :--- |
|  | read.1.PAST.PERF | new-ta | book |
|  | 'I read the new book' |  |  |
|  | pro-chetox | (edna) nova | kniga |
|  | read.1.PAST.PERF | (one/a) new | book |
|  | 'I read a new book' |  |  |

## DNN, $\pm$ null-N-licensing art

Distinguishes languages in which a complement or a relative clause depending on an empty head noun can be constructed with an article (e.g., Spanish, Portuguese, Basque, Ancient Greek) from languages in which this function requires a demonstrative (e.g., most other Romance languages, Standard Greek)

## Manifestations

Is any of the following true in the language?
a) Articles appear in nominals that contain no overt head noun (nor adjective) but contains a non-pronominal genitive argument of it
$\begin{array}{llll}\text { ex: } & \text { el } & \text { de } & \text { Juan } \\ \text { the } & \text { of } & \text { Juan }\end{array}$
'Juan's one'
b) Articles appear in nominals that contain no overt noun (nor adjective) and an adpositional argument/adjunct
ex: la exposición "Somos Monegros" se inaugura este viernes dentro de las por el XX aniversario de la Comarca

SPANISH the exhibition "Somos Monegros" opens this Friday within the ones for the 20th anniversary of the Comarca (lit: within the for the 20th ...)
c) Articles appear in nominals that contain no overt noun and a relative clause
ex: el que salió
the that went-out
'the one that went out'
el que conocí
the that met.1S
'the one I met'

DIN, $\pm$ D-controlled inflection on $\mathbf{N}$
Distinguishes languages that have a special inflection on the noun depending on the presence/absence/choice/interpretation of the determiner (e.g. nunation in Arabic) from
languages in which head nouns always have the same form with all determiners (e.g., Hebrew)

## Manifestations

Is any of the following true in the language?
The language exhibits distinct noun morphology depending on the choice of the determiner (beyond $\varphi$-feature concord)

```
ex: samiYa l-walad-u şawt-a-n varīb-a-n ARABIC
    hear.PRF.3S.M DEF-boy-NOM sound-ACC-NUN
    strange-ACC-NUN
    `The boy heard a strange sound'
    samiGa r-rağul-u şawt-a walad-i-n
    hear.PRF.3S.M DEF-man-NOM sound-ACC boy-OBL-NUN
    'The man heard a boy's voice'
```

FGC, $\pm$ grammaticalized classifier
Distinguishes languages that require a classifier to combine a cardinality expression with a noun (e.g., Mandarin, Cantonese, Japanese) from languages that do not (e.g., Chickasaw)

## Manifestations

Is any of the following true in the language?
There are lexically selected classifiers co-occurring with nouns denoting naturally atomic entities combined with numerals

```
ex: san ge ren
                                    MANDARIN
    three CLASS
    people
    'three persons'
    san zhi bi
    three CLASS pen
    'three pens'
    san ben shu
    three CLASS book
    'three books'
        (from Cheng and Sybesma 1999, 514)
```


## FGE, $\pm$ indefinite bare classifier

Distinguishes between two types of classifier languages, both types allowing sequences $\mathrm{Cl}-\mathrm{N}$ without a numeral ('bare classifiers'). In one type (e.g., Mandarin) bare classifiers can only produce the interpretation of an indefinite quantifier, while a completely bare noun can either have the definite or indefinite reading. In the other type (e.g., Cantonese) bare classifiers have a bounded interpretation, definite or indefinite, while a completely bare noun only has the interpretations of English bare mass/plurals

## Manifestations

Is any of the following true in the language?
Bare nominals without an overt classifier in object position can receive a definite specific interpretation

| ex: | Hufei he-wan-le | tang |  |
| :--- | :--- | :--- | :--- |
|  | Hufei drink-finish-LE | soup |  |
|  | 'Hufei finished the soup' |  | (from Cheng and Sybesma 1999, 510) |

FCN, $\pm$ person spread to predicate nouns
Distinguishes languages in which predicate nouns are inflected for person, which is controlled by the subject of the predication, (e.g., Dravidian) from languages in which nouns do not inflect for person (e.g., IE, Uralic, Semitic)

## Manifestations

Is any of the following true in the language?
Nouns found as the lexical head of predicative phrases agree with their subjects in person morphology

```
ex: āme manci-di
                                    TELUGU
    she good-person-3S
    'she is a good person'
    wällu manci-wällu
    they good-person-3P
    'they are good persons'
    nuwwu manci-wäḍiwi
    you.S good-person-2S
    'you are a good person'
```


## HMP, $\pm$ NP-heading modifier

Distinguishes languages in which adjectival modification is systematically expressed with the property realized as a head noun and the entity denoted by the nominal appearing as a modifier of the latter (i.e., kindness of woman = kind woman) (e.g., Kadiweu, Kuikuro) from languages in which this construction is lexically exceptional or absent (e.g., Italian, English)

## Manifestations

Is any of the following true in the language?
Abstract nouns denoting objective properties such as shape, colors or provenance modified by a genitive argument (including possessive pronouns) denote the referent of the genitive argument (with the property denoted by the abstract head noun interpreted as an attribute of such a referent)

```
ex: wëri kawë-no n-ee-ja-n TIRIYÓ
    woman high-NOMINALIZER (= tallness) 3-come-PRES.IMPERF-UNCERTAIN
```

    'the tall woman is coming' (from Meira 1999: 525)
    
## ARR, $\pm$ free reduced relatives

Distinguishes languages in which all adjectives can be used as reduced relative clauses (e.g., French, Spanish, Standard Greek) from languages in which reduced relative clauses are restricted to special categories (like verbal participles and branching phrases), or impossible at all (e.g. English, German)

## Manifestations

Is any of the following true in the language?
a) There are free (truth-functionally synonymous/interchangeable) permutations of the order of the same two or more adjectives
ex: oto b-u bulo b-u bees b-u Alman WOLOF
car CL-LKblue CL-LKnew CL-LKGerman
oto $b$-u bees b-u bulo b-u Alman
oto $b-u$ Alman $b-u$ bulo $b-u$ bees
oto b-tu Alman b-u bees b-u bulo
'a new blue German car'
b) There are adjectives that can occur to the left and also to the right of a cardinal numeral in indefinite nominal phrases

c) There are adjectives that can occur to the left and also to the right of a post-nominal argument of N
ex. la sorella di Gianni bionda
ITALIAN
the sister of Gianni blonde
la sorella bionda di Gianni
the sister blonde of Gianni
d) There are argument adjectives occurring before the head noun, and some adjective occurs postnominally

```
ex: \varepsilonv\alpha \gamma\varepsilon\rho\mu\alphav\iotaкó \alphav\tauокí\eta\tauо GREEK
a German car
\varepsilonv\alpha \alphav\tauокі́v\eta\tauо \pi\rho\alphá\sigma\iotavo
a car green
```

GCN, $\pm$ head-marking with Genitive
Distinguishes languages in which nouns occurring with a genitive argument are marked as different from the occurrences without a Genitive (e.g., Hungarian, Finnish, Turkish, Yukaghir, Arabic, Hebrew, Wolof) from languages in which nouns do not have this kind of alternation (e.g., Latin, English, Japanese, Basque)

## Manifestations

Is any of the following true in the language?
At least some head nouns change their form (through the morphophonology of the root or an affix) when with a genitive argument while they don't when not modified by a genitive argument

```
ex: ha bayit
HEBREW
the house
beyt ha more
house the teacher
'the teacher's house'
```


## GFN, $\pm$ Person controlled marking

Distinguishes languages in which nouns occurring with a genitive argument are marked through a Person agreement morpheme controlled by the person feature of the genitive (e.g., Hungarian, Finnish, Udmurt, Turkish, Yukaghir) from languages in which the allomorph of a noun constructed with a Genitive is not characterized by an agreement morpheme (e.g., Arabic, Hebrew, Wolof)

## Manifestations

Is any of the following true in the language?
There is a morpheme that appears on nouns modified by a genitive argument and whose realization depends on the Person feature encoded on the genitive

```
ex: Vanja-len kniga-jez
UDMURT
Vanya-GEN book-3S
'Vanya's book'
(min-am) kniga-je
I-GEN book-1S
'my book'
kniga
'(a/the) book'
```


## GFP, $\pm$ agreement with all pronouns

Distinguishes languages in which nouns occurring with a genitive argument are marked through a Person agreement morpheme whatever the Person of the genitive argument (e.g., Hungarian, Finnish, Turkish) from languages in which this marking only appears with 3rd person Genitives (e.g., Yukaghir)

## Manifestations

Is any of the following true in the language?
There are different realizations of the morpheme that appears on a noun modified by a genitive argument depending on whether the genitive carries 1st or 2nd person features


## GP3, $\pm$ agreement with all 3rdPers DPs

Distinguishes languages in which nouns marked through a Person agreement morpheme controlled by a genitive argument admit any 3 rd person genitive nominal as a controller (e.g., Hungarian, Turkish, Yukaghir, Udmurt) from languages in which only possessive pronouns act as controllers (e.g., Finnish, Buryat)

## Manifestations

Is any of the following true in the language?
Non-pronominal genitive arguments agree in Person with the morpheme appearing on the head noun

| ex: | Vanja-len | kniga-jez |
| :--- | :--- | :--- |
|  | Vanya-GEN book-3S | UDMURT |
|  | 'Vanya's book' |  |
|  | (min-am) | kniga-je |
|  | I-GEN | book-1S |
|  | 'my book' |  |

## GEI, $\pm$ genitive inversion

Distinguishes languages in which nouns marked through an agreement morpheme controlled by a genitive argument systematically allow the latter to also occur in postnominal position (e.g., Yakut, which provides a clearest example but where the phenomenon is limited to personal pronoun subjects) from languages in which no such Genitive-noun inversion is possible (e.g., Hungarian, Turkish)

## Manifestations

## Is any of the following true in the language?

The Genitive argument of a head noun is realized either prenominally or postnominally and triggers agreement on the head noun

| ex:en <br> you.2S chair-2S | YAKUT |
| :--- | :--- | :--- |
| 'your chair' |  |
| oloppoh-un en <br> chair- 2 S you. 2 S |  |
|  |  |

## CSE, $\pm$ full c-selection

Distinguishes languages in which a head noun can take more than just one argument, like clauses (e.g., IE, Semitic), from languages in which nouns cannot take a second direct argument or an oblique one, the latter occurring embedded in modifiers or extraposed (e.g., Ugric)

## Manifestations

Is any of the following true in the language?
Two arguments of the noun (realized as possessive pronoun, non-pronominal genitive or PP/oblique, whether or not independently licensed by a linker) can co-occur, and neither of them is in an extraposed position

```
ex: John's picture of Mary
    John's conversation about Napoleon
```

EAL, $\pm$ ergative alignment
Distinguishes languages that extend the ergative/absolutive Case system of their clauses to their nominal phrases with multiple arguments (e.g., Archi, Lak) from languages in which clauses are ergative/absolutive while in nominals direct arguments are in the Genitive Case (e.g., Basque)

## Manifestations

Is any of the following true in the language?
The internal argument of a noun can have the same Case morphology (e.g. Absolutive) as the internal argument of a verb (applies to languages that have Ergative/Absolutive alignment in clauses)

| ex: | Rasulli | tilivizor | bušmul | ARCHI |
| :--- | :--- | :--- | :--- | :--- |
|  | Rasul.I.ERG | tv.3S.ABS | 3S.buy.MASDAR(=NOMINALIZER) |  |
|  | 'buying of TV by Rasul' (Polinsky, Radkevich and Chumakina 2017: 60) |  |  |  |

## CAL, $\pm$ clausal alignment

Distinguishes languages that extend (at least part of) the accusative Case system of their clauses to nominal phrases with multiple arguments (e.g., Hebrew, Tamil, Telugu) from languages in which clauses are nominative/accusative while in nominals direct arguments are in the Genitive Case (e.g., Latin, Polish, English, Spanish and the rest of IE, Arabic)

## Manifestations

Is any of the following true in the language?
When it co-occurs with an external argument, the internal argument of a noun can have the same Case morphology (e.g. Accusative) as the internal argument of a transitive verb, and this Case morphology is different from that found on the external argument (applies to languages that have Nominative/Accusative alignment in clauses)

```
ex: ha-harisa šel ha-cava 'et ha-'ir
HEBREW
    the-destructionof the-army ACC the-city
    'the army's destruction of the city' (Siloni 1997: 27)
    ha-cava haras 'et ha-'ir
    the-army destroyed ACC the-city (Siloni 1997: 27)
    ha-'ir nehersa 'al-yedey ha-cava
    the-city was.destroyed by the-army (Siloni 1997: 89)
```


## LKA, $\pm$ argument linker

Distinguishes languages that must use a dedicated marker, different from adpositions, to introduce most direct and oblique arguments of a noun (e.g., Mandarin, Cantonese, Japanese, Wolof) from languages in which no such a marker exists (e.g., Germanic, Romance, Slavic, Semitic)

## Manifestations

Is any of the following true in the language?
There is a morpheme that introduces direct and indirect arguments as well as other modifiers of head nouns, and is distinct from case marking, articles and from adpositions introducing arguments of the verb

```
ex: oto (b-)u Maryam
    WOLOF
    car CL-LKMaryam
    'Maryam's car'
    oto b-u bees
    car CL-LKnew
    'a blue car'
```


## LKO, $\pm$ oblique linker

Distinguishes languages that must use a dedicated marker, different from normal adpositions, to introduce only oblique arguments of a noun (e.g., Yukaghir, Basque) from languages in which no such a marker is required (Germanic, Romance, Slavic, Semitic)

## Manifestations

Is any of the following true in the language?
There is a morpheme that introduces oblique arguments of the noun, and is distinct from case marking, articles and from adpositions introducing arguments of the verb

```
ex: Araba-ko zortzi urte-eta-ko zapone one-ko ardo-a
    Alava-ko eight year-LOC-ko flavor good-ko wine-ART
    'wine of good flavor (gathered) in eight years in Alava'
    mendi-eta-ko handi haiek
    mountain-LOC-ko big those
    'those big ones in the mountains' (Trask 1997: 91) BASQUE
```


## LKP, $\pm$ predicative linker

Distinguishes languages that must use a dedicated marker to introduce adjectives and relative clauses modifying a noun (e.g., Mandarin, Cantonese, Yukaghir) from languages in which no such a marker is required (e.g., Slavic, Semitic, Japanese)

## Manifestations

Is any of the following true in the language?
a) There is a morpheme introducing adjectives that is different from articles

b) There is a morpheme introducing relative clauses that is distinct from articles, wh-fronted elements and any complementizer introducing other subordinate clauses

```
ex: tééré b-u jàng naa b-i WOLOF
    book CL-LK read 1S.PERF CL-DEF.PROX
    'the book that I read'
```

```
ab téére b-u jàng naa
INDEF+CL book CL-LKread 1S.PERF
'a book that I read'
```


## DMP, $\pm$ def matching pronominal possessives

Distinguishes languages in which a suffixed article licenses a Genitive Case on personal pronouns immediately following it (e.g., Romanian, Bulgarian, Norwegian, Icelandic) from languages in which a suffixed article does not have this licensing property (e.g., Danish, Faroese)

## Manifestations

Is any of the following true in the language?
Nouns or adjectives bearing a definite affix can be immediately followed by a possessive pronoun

```
ex: kniga-ta moja
BULGARIAN
    book-the my
    'my book'
    bok-en min NORWEGIAN
    book-the my
    'my book'
```


## DMG, $\pm$ def matching genitives

Distinguishes languages in which a suffixed article licenses a Genitive Case on an immediately following full nominal phrase introduced by an overt determiner (e.g., Romanian) from languages in which this licensing is limited to pronouns (e.g., Bulgarian, Norwegian, Icelandic)

## Manifestations

Is any of the following true in the language?
a) Nouns or adjectives bearing a definite affix can be immediately followed by a full genitive phrase introduced either by a proper name in determiner position or by an overt determiner

```
portret-ul
portrait-the Monalisa.GEN
`Leonardo's portrait of Mona Lisa'
portret-ul student-ului
portrait-the student-the.GEN
'the student's portrait'
```

b) A morpheme with the same phi-feature morphology as a definite article though not necessarily semantically definite can be immediately followed by a full genitive phrase introduced either by a proper name in determiner position or by an overt determiner

| ex: | un | portret $\boldsymbol{a l}$ | Monnalisei | $a-l$ | lui-Leonardo ROMANIAN |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | a | portraitAL | Monalisa.GEN | AL | he.GEN-Leonardo |
| 'a portrait of Mona Lisa by Leonardo' |  |  |  |  |  |
| un | portret | a-l | student-ului |  |  |
|  | a | portrait | AL | student-the.GEN |  |
|  | 'a portrait of the student' |  |  |  |  |

## GUN, $\pm$ uniform genitive

Distinguishes languages in which there is only one, non-adpositional, form of Genitive Case, which can be iterated and occur in several positions of the nominal phrase (e.g. Latin, Classical Greek, Finnish) from languages in which non-adpositional Genitives only occur in fixed, non-iterable positions (e.g., modern Germanic, Romance, Slavic, Semitic)

## Manifestations

Is any of the following true in the language?
a) A non-adpositional Genitive can occur between a prenominal adjective and the head noun and, with the same type of morphological realization, also to the right of the head noun

```
ex: alio genere Furiarum
                                    (Petr. 1)
                                    LATIN
    other kind Fury.GEN.F.P
    'another kind of Furies'
    ingens scolasticorum turba (Petr. 6)
    large scholar.GEN.MP crowd
    'a large crowd of students
    repentinam eius defensionem Gabini (Cic.Fam., 1,9)
    sudden he.GEN defence Gabinius.GEN
    'his sudden defence of Gabinius' (from Gianollo 2005: 72)
```

b) Non-adpositonal Genitives can occur with the same type of morphological realization once on one side of the noun, and twice on the other side of the noun

```
ex: \tau\etàv \tauo\tilde{v}\\Lambda\alphá\chi\eta\tauo\varrho \tau\tilde{\omega}v v\varepsilon\tilde{\omega}v d\dot{\alpha}\chi\chìv
the the.GEN.S.M Laches.GEN the.GEN.P.F ship.GEN.P.F command
    'Laches' command of the ships'
    (Thuc, 3.115.6, from Guardiano 2011: 130)
    \tauòv \tau\rhoó\piov \tauo\tilde{ < ह̇ंब人ivov}
    the.ACC.S.M way.ACC.S.Mthe.GEN.S.M praising.GEN.S.M
    'the way of praising' (Plato 199 a 4, from Guardiano 2011: 129)
```

c) There are nominal phrases in which one and the same non-adpositional realization of Genitive occurs twice to the right of a postnominal adjective


```
the PRT decree this the.GEN.S.F assembly.GEN.S.F
\tauoṽ \tau\alphà\varsigma \sigma\piov\delta\grave{\alpha} \lambda\varepsilon\lambdav́\sigma0\alphal
the.GEN.S.N the treaty being-dissolved
'this decree of the assembly that the peace treaty be broken'
(Thuc. 1.87.6, from Guardiano 2011: 130)
```

d) There are nominal phrases in which two non-adpositional realizations of Genitive occur to the left of AP +N (NB: in some phrases the same Genitive may also occur another time after APs)

```
ex: Leonardo-n Louvre-n maailmankuuluisa (Mona Lisa-n) muotokuva
    Leonardo-GEN Louvre-GEN famous (Monna Lisa-GEN)
                                    portrait
    'Leonardo's famous portrait (of Monna Lisa) at the Louvre'
                                    FINNISH
```

e) There are nominal phrases in which a non-adpositional realization of Genitive occurs three times

| ex: | eorum dierum | consuetudine | itineris | nostri |
| :--- | :--- | :--- | :--- | :--- |
| those.GEN day.GEN.PL habit | journey.GEN.S | our.GEN.S |  |  |
| exercitus perspecta |  | LATIN |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  | 'having accurately observed our army's method of marching of those days' |  |  |  |

$\left.\begin{array}{lllll}\text { Brutuksen } & \begin{array}{l}\text { Julius Caesarin } \\ \text { Brutus.GEN } \\ \text { murha }\end{array} & \text { Julius Caesar.GEN } & \begin{array}{l}\text { vuoden } \\ \text { year.GEN }\end{array} & 44 E K \text { BC }\end{array} \quad \begin{array}{l}\text { (häikäilemätön) } \\ \text { pitiless }\end{array}\right]$

## GAD, $\pm$ free Gen

Distinguishes languages in which there is an adpositional Genitive Case, which can be iterated, (e.g., English, Italian, Bulgarian, Basque) from languages in which Genitive is nonadpositional and occurs in fixed, non iterable positions (e.g., Standard Greek, Russian, Polish, Turkish)

## Manifestations

Is any of the following true in the language?

There are prepositional or postpositional Genitive arguments

| ex: le livre de notre ami |  | FRENCH |
| :--- | :--- | :--- | :--- | :--- | :--- |
| the book of our friend |  |  |
| 'our friend's book' |  |  |

GFL, $\pm$ GenL
Distinguishes languages in which there is a non-adpositional non-iterable Genitive Case that appears to the right of canonically ordered ("structured", see parameter NM1 below) adjectives (e.g., Standard Greek, Russian, Polish and most Slavic languages, Icelandic, German, Irish, Welsh) from languages in which Genitive does not have such properties (e.g, English, most of Romance, Basque)

## Manifestations

Is any of the following true in the language?
a) A non-adpositional Genitive expressing an argument or alienable possessor relation to the head noun occurs after an adjective, whether or not the noun intervenes (applies to languages with no reduced relative clauses in prenominal position: otherwise the relevant adjective must follow a numeral in an indefinite nominal argument)

| ex: | to the 'the | $\theta \alpha v \mu \alpha \sigma \tau o ́$ beautiful l's beautif | $\pi 0 \rho$ por |  | $\tau \eta \varsigma$ <br> the.GEN | колє́ $\lambda \alpha \varsigma$ girl.GEN | GREEK |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | port <br> port <br> 'the |  | ful port | $y$ the | plentyn child |  | WELSH |


| (šis) | juodas | Reginos | automobilis | LITHUANIAN |
| :--- | :--- | :--- | :--- | :--- |
| (this-NOM) | black-NOM | Regina-GEN | car-NOM |  |

b) A non-adpositional Genitive expressing an argument or alienable possessor relation to the head noun (except for 'home' as head noun) occurs after the noun

| ex. | то | $\varphi о ́ \rho \varepsilon \mu \alpha$ |  | кол $\grave{\prime} \alpha_{\text {¢ }}$ | GREEK |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | he | dress | the.GEN | girl.GEN |  |
|  | 'the girl's dress' |  |  |  |  |

```
harisat ha-migdal
destruction the-tower
```

'the destruction of the tower' HEBREW

## PGL, $\pm$ partial GenL

Distinguishes languages in which the non-adpositional non-iterable Genitive occupying the post-adjectival position (GenL) is restricted to few specified classes of phrases and head nouns (e.g. some Romance dialects of southern Italy, Old Romance) from languages in which it does not occur at all (e.g., English, French, Basque)

## Manifestations

Is any of the following true in the language?
There is a non-adpositional Genitive occurring after an adjective and the N-Gen relation is any of: kinship/part-whole/container-containee/inalienable possession/'home' as head nounpossessor

| ex: | $a$ buttigghja | grossa/miricana/lorda | $u$ | vinu | (janku) |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| the | bottle | big/American/dirty | the | wine | (white) |

'the big/American/dirty bottle of (white) wine'
VERBICARO (adapted from Silvestri 2013: 142)

## GGH, $\pm$ generalized GenH

Distinguishes languages in which all full nominal phrases can occur as non-iterable Genitives in pre-adjectival position $(\mathrm{GenH})$ bearing a phrase-final affix (e.g., English, Mainland Scandinavian) from languages in which this construction is restricted to a class of simple head nouns (mostly proper names) capable of bearing a word-level suffix (e.g., German, Dutch, Afrikaans).

## Manifestations

Is any of the following true in the language?
There is a pre-adjectival Genitive occurring as a visibly branching phrase headed by a common noun
ex. the new king's precious crown

## GSI, $\pm$ Grammaticalized inalienability

Distinguishes languages that require inalienably possessable nouns to always occur with an affix agreeing in person with the possessor, even if the latter is unexpressed and indefinite/arbitrary (e.g., Kadiweu) from languages that do not (e.g., IE, Uralic, Semitic)

## Manifestations

Is any of the following true in the language?

Inalienably possessed nouns appear with a morpheme agreeing with the possessor, even when the possessor is unexpressed and/or non-referential/arbitrary
ex: e-ajike
KADIWEU
3.INDEF-face/chin
'somebody's face/chin, the face/chin' (from Sandalo 1996)

## ALP, $\pm$ alienable possession

Distinguishes languages that require possessed nouns to occur with a special affix, in addition to the normal marking of the genitive relation, if and only if the possession is alienable (e.g., Tungusic) from languages that do not (e.g., IE, Semitic)

## Manifestations

Is any of the following true in the language?
There is a special morpheme used with possessed nouns to indicate that the object is alienable from the possessor

```
ex: dil-i }
EVENKI
head-1S
'my head'
dil-i-\etai-\beta
head-ev-ALIEN.POSS-1S
'the head (of an animal) that belongs to me'
Maša bödel-e\eta-en
EVEN B
Maša leg-alien.poss-3S
'a leg that belongs to Masha (not part of Masha)'
Maša bödel-en
Maša leg-3S
'Masha's leg'
```


## GIT, $\pm$ Genitive-licensing iteration

Distinguishes languages that do not license more than one Genitive Case per head noun and need to resort to an additional nominal head to license a second genitive argument (e.g. the repeated head as in Kadiweu or a noun place-holder as Romanian al), from languages that do not use such strategies (e.g., the rest of IE, Uralic, Semitic)

## Manifestations

Is any of the following true in the language?
If the noun is modified by two non adpositional Genitive arguments, the second one is licensed through the repetition of the licensing element (the head noun or a nominal proform) that licenses the first one

| ex: | portret-ul Monnalisei $a-l$ lui-Leonardo | ROMANIAN |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | portrait-the | Monalisa.GEN | AL | he.GEN-Leonardo |  |
|  | 'Leonardo's portrait of Mona Lisa' |  |  |  |  |

## UST, $\pm$ unstructured modifiers

Distinguishes languages that do not display linear ordering restrictions on prenominal adjectives to the right of numerals (e.g., Uzbek, some varieties of Turkish) from languages that do so (e.g., IE, Uralic, Semitic, other Altaic languages)

## Manifestations

Is any of the following true in the language?
There are freely ordered (truth-functionally synonymous/interchangeable) adjective sequences occurring in between an indefinite numeral and the head noun
ex: bir chiroyli kulrang katta mushuk UZBEK
a beautiful grey big cat
bir katta chiroyli kulrang mushuk
bir katta kulrang chiroyli mushuk
bir kulrang katta chiroyli mushuk
bir kulrang chiroyli katta mushuk 'a beatiful big grey cat'

GPC, $\pm$ gender-polarity cardinals
Distinguishes languages that have systematic gender counter-agreement (masculine with feminine and viceversa) between cardinal numerals and nouns (e.g., Semitic) from languages that have gender agreement with the subset of numerals that are inflected (e.g., IE)

## Manifestations

Is any of the following true in the language?
There is gender mismatch between cardinal expressions for numbers higher than two and the head noun


## PSC, $\pm$ plural spread from cardinal quantifiers

Distinguishes languages that use plural nouns after cardinal numerals occurring as indefinite quantifiers (e.g., most of IE, Tungusic) from languages that use singular ones (e.g., Uralic, Turkic, Farsi, Celtic)

## Manifestations

Is any of the following true in the language?

Nouns exhibit overt plural marking when cardinal numerals higher than 'one' are present and function as indefinite quantifiers

```
ex: three boys, four boys
    one boy
```


## PCA, $\pm$ plural spread through cardinal adjectives

Distinguishes languages that use plural nouns after numerals occurring as numerical adjectives after a demonstrative or other definite determiner (e.g., Farsi) from languages that use singular ones even in this case (e.g., Uralic, Turkic, Celtic)

## Manifestations

Is any of the following true in the language?
Nouns exhibit overt plural marking when modified by a cardinal numeral higher than 'one' cooccurring with a plural determiner

```
ex: do ta danešju
FARSI
    two CL student
    'two students'
    do ta danešju-ha
    two CL student-P
    'the two students/*two students'
    un do ta mcenzel-*(ha)
    that two CL house-P
    'those two houses'
```


## PMN, $\pm$ personal marking on numerals

Distinguishes languages that mark 1st and 2nd Person features on cardinal numerals to express meanings like e.g. English we three (e.g., Mari, Udmurt) from languages that never do so (e.g., Hungarian, Finnish)

## Manifestations

Is any of the following true in the language?
Cardinal numerals bear a person agreement marker (used in the genitive construction for head marking) to form "personal" numerals ('we three')

```
ex: kuiń-nami
                                    UDMURT
three-1P
'we three'
kuiń-nadị
three-2P
'you two'
```

```
kuiń-nazi
three-3P
'they three'
```


## RHM, $\pm$ head marking with relative clause

Distinguishes languages in which nouns modified by a relative clause contain a possessormarking person affix controlled by the subject of the relative (e.g., Hungarian, Yakut) from languages in which nouns do not have this kind of alternation (e.g., IE, Finnish, Estonian, Turkish).

## Manifestations

Is any of the following true in the language?
The head noun modified by a relative clause takes a person agreement affix controlled by an argument within the relative

```
ex: a festelt polc-om
                                    HUNGARIAN
    the paint.PERF.PRTCP shelf-1S
    'the shelf that I painted'
    a polc
    the shelf
    [ма лутум] машина-ем KHANTY
    I bought car-1S
    'the car that I bought'
    bu Künnej kömölöh-ör kyyh-a YAKUT
    this Künnej help-AOR girl-3S
    'this girl whom Künnej helps'
```


## FRC, $\pm$ finite relative clause

Distinguishes languages that have relatives as full finite clauses and normal clausal Caseassignment (e.g., IE, Semitic, Finnish, Japanese, Basque) from languages in which relatives only have a verb in the participle (e.g., Turkic, some conservative Uralic varieties)

## Manifestations

Is any of the following true in the language?
The predicate of relative clauses bears morphology specific to finite verb forms

[^0]
## NRC, $\pm$ participial relative clause

Distinguishes languages in which relatives have a verb in the participle, with a subject expressed through an adnominal Case, like Genitive, (e.g., Finnish, Pashto, Marathi, Japanese, Basque) from languages in which participial relatives only have a null subject controlled by the head nominal (e.g., Hungarian, Estonian, Arabic, Hebrew, most of IE)

## Manifestations

Is any of the following true in the language?
a) There are relative clauses constructed with a participle (rather than an inflected verb) and an overt subject which is not the head of the relative

```
ex: [[nesi-s-tow jway b-oxi-n bäk'i-ru-li]-s
DEM.I-GEN1 dog.ABS.III III-run-PFV.CVB III-go-PST.PTCP-NMLZ-GEN1
uži]
boy.ABS.I
'the boy whose dog has run away' (from Polinsky 2015: 269)
TSEZ
[Saša-n košt-mo] pölem
MEADOW MARI Sasha-GEN enter-PRTC room 'the room that Sasha walked in'
```

b) There are relative clauses constructed with an overt transitive subject (other than the head of the relative) which is assigned an exclusively adnominal case (typically Genitive)

```
ex: [so-len lydź-ono] kniga-jez
UDMURT
he-GEN read-PRT book-ACC
'the book which will be read by him'
```

[Saša-n košt-mo] pölem MEADOW MARI
Sasha-GEN enter-PRT room
'the room that Sasha walked in'
Ali-nin dükkan-dan al-diğ-ı bu güzel çiçek TURKISH
Ali-GEN shop-ABL buy-PRT-3 one beautiful flower
'a beautiful flower that Ali bought in the shop'

## DOR, $\pm$ definiteness on relatives

Distinguishes languages that spread the definiteness marking of the head of a relative clause to an element introducing such relative (e.g., Arabic, Wolof) from languages in which relatives are not marked with respect to the definiteness of the head nominal (e.g., Hebrew, IE)

## Manifestations

Is any of the following true in the language?
Relative pronouns agree in (in)definiteness with their antecedent (indefinite if the head is indefinite, definite if the head is definite; if indefiniteness is $\emptyset$-marked in the language, the test only applies effectively if the language has no Ø complementizers)


## FFP, $\pm$ feature spread to particles

Distinguishes languages in which the head noun agrees in phi-features with adpositions or linkers introducing its arguments/modifiers (e.g., Indo-Aryan, Wolof) from languages in which there is no such a feature spread (e.g., the rest of IE, Semitic)

## Manifestations

Is any of the following true in the language?
Particles introducing arguments of a head noun (genitive adpositions or linkers) exhibit agreement at least in number with that head noun

```
ex: Jon-ki patni
    HINDI
    Jon-GEN wife
    'John's wife'
    Jon-ka bhai
    Jon.GEN brother
    'John's brother'
    Jon-ke bhai
    Jon.GEN brothers
    'John's brothers'
```

| Jŏna-ci bah |  | MARATHI |
| :---: | :---: | :---: |
| Jon-GEN.F.S sis |  |  |
| 'John's sister' |  |  |
| Jŏna-cyā bahin |  |  |
| Jon-GEN.F.P sist |  |  |
| 'John's sisters' |  |  |
| xaal w-u réy | $w-i$ | WOLOF |
| melon CL-LKbig | CL-DEF |  |
| 'the big melon' |  |  |
| xaal yi-u réy | $y-i$ |  |
| melon CL-LKbig | CL-DEF |  |
| 'the big melons' |  |  |

## NUP, $\pm$ NP under non-genitive arguments

Distinguishes languages in which the head noun surfaces after its non-Genitive complements and adpositional modifiers (e.g., Indo-Aryan, Udmurt, Altaic, Dravidian, Basque, Archi, Lak) from languages in which the noun surfaces before its non-Genitive complements and adpositional modifiers (e.g., the rest of IE, Finnish, Estonian, Semitic, Wolof)

## Manifestations

Is any of the following true in the language?
Non-Genitive arguments precede their head N


## PNP, $\pm$ complement under $\mathbf{P}$

Distinguishes prepositional languages, in which the complement of particles (i.e. of an adposition or of a linker) normally surfaces after it (e.g., English, French, Russian, Hebrew, Malagasy) from postpositional ones, in which it normally surfaces before the particle (e.g., Turkish, Japanese, Basque, Mandarin, Hindi)

## Manifestations

Is any of the following true in the language?
a) In PPs, complements follow the head P
ex. of John, with John, from John
b) Adpositional Genitive arguments follow their head N
ex. a picture of John
c) In linker phrases, complements follow the linker
ex. bëgg naa jàng $a$-b téére $b-u$ refet WOLOF want 1S.PRF read indef-CL book CL-LKbeautiful 'I want to read a beautiful book.'
d) Linker phrases follow their head noun

| ex. | $b e ̈ g g ~ n a a ~ t e ́ e ́ r e ~$ | $b-u \quad$ refet | jàng $\quad a-b$ | WOLOF |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | want 1 S.PRF read indef-CL | book | CL-LKbeautiful |  |
|  | 'I want to read a beautiful book.' |  |  |  |

## NUD, $\pm$ NP under D

Distinguishes languages in which the noun phrase normally surfaces after its determiner (e.g., IE, Semitic) from languages in which the noun surfaces before its determiner (e.g., Basque, Wolof)

## Manifestations

Is any of the following true in the language?
a) In argument nominal phrases, the article occurs as the first word (except for 'all' and demonstratives), or affixed to the first word and followed by some other overt element ( N or some other category)

| ex.il lupo grande di Gianni | ITALIAN |  |  |
| :--- | :--- | :--- | :--- |
| the wolf big of | Gianni |  |  |
|  |  |  |  |
|  | Gianni's big wolf' |  |  |


| Lup-ul | mare | al | lui | Ion | ROMANIAN |
| :--- | :--- | :--- | :--- | :--- | :--- |
| wolf-the big | AL | he.GEN | Ion |  |  |
| 'Ion's big wolf' |  |  |  |  |  |

b) Cardinal or numerical adjectives ('one','’two',...., 'many', 'few'...) occur as the first word of a nominal phrase with an indefinite reading and after a Genitive/possessive with a definite reading

```
ex: moje trzy książki
                                    POLISH
my three books
'my three books' (informationally unmarked)
trzy moje ksiażki
'three books of mine' (informationally unmarked) (from Rutkowski 2007)
```


## NUC, $\pm \mathbf{N}$ under cardinals

Distinguishes languages in which the head noun normally surfaces after cardinal numerals (e.g., IE, Uralic, Altaic) from languages in which the noun surfaces before some or all cardinal (higher than 'one') numerals (e.g., Semitic, Malagasy). As a further typological consequence, in the latter case the noun precedes all structured adjectives (see parameter NM1 below) in the reverse order

## Manifestations

Is any of the following true in the language?
Cardinals can precede the noun in definite argument nominal phrases
ex: I saw those three new American cars

## NM1, $\pm$ N under M1 As

Distinguishes languages in which, given the crosslinguistically canonical sequence of structured adjectives [SPEAKER/SUBJECT-ORIENTED ADJECTIVE + MANNER1 (e.g. quality/size) AdJECTIVE + MANNER2 (e.g. shape/color) ADJECTIVE + NATIONALITY ADJECTIVE], MANNER1 adjectives can surface to the left of the head noun (e.g., Italian, French, Spanish, Walloon, Germanic, Slavic, Standard Greek) from languages in which they cannot (e.g., Celtic, Farsi, some Romance dialects of Italy, Italiot-Greek)

## Manifestations

Is any of the following true in the language?
a) As a general rule, quality/size adjectives can precede the noun in discourse-neutral contexts (without being restricted to few selected lexical items)
ex: une merveilleuse table de bois française
FRENCH
a wonderful table of wood French 'a wonderful wooden French table'
b) In discourse neutral contexts, possessives can precede the noun and follow a cardinal numeral in nominal arguments with a visible definite article

| ex: | Gianni ha incontrato $\quad i \quad$ tre | suoi amici americani |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Gianni has met | the three | his friends American |  |  |
|  | 'Gianni met his three American friends' |  |  | ITALIAN |

c) There are sequences of two or more adjectives preceding the noun in discourse-neutral contexts

| una <br> a.F <br> 'a d | cara <br> dear.F.S <br> old friend | vecchia <br> old.F.S | amica <br> friend.F.S |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| un | bel | nuovo | vestito | (blu | francese) |
| a.M | nice.M.S | new.M.S | dress.M.S | blue | French.S |

## EAF, $\pm$ fronted high As

Distinguishes languages in which the head noun surfaces to the left of nearly all adjectives, but a minority of semantically simple SPEAKER-ORIENTED adjectives can be placed before the noun (e.g., Celtic, some Romance dialects of Italy) from languages in which there are no such exceptions (e.g., some Romance dialects of Sicily)

## Manifestations

Is any of the following true in the language?
A few lexically selected adjectives (e.g., with the meaning former, present/current, fake, alleged, supposed, amusing/funny, little, additional, strange) can precede the noun


## NM2, $\pm$ N under M2 As

Distinguishes languages in which, given the crosslinguistic structured sequence of adjectives (see NM1 above), MANNER2 adjectives can surface to the left of the head noun (e.g., Walloon) from languages in which they cannot (e.g., Italian, French, Spanish)

## Manifestations

Is any of the following true in the language?
There are shape/color adjectives preceding the noun in discourse-neutral contexts
ex: a (nice new) blue (French) dress

| one (bèle) bleuve cote (alemande) | WALLOON |
| :--- | :--- | :--- |
| a nice blue dress German |  |
| 'a (nice) blue (German) dress' |  |

## NUA, $\pm$ N under As

Distinguishes languages in which, given the crosslinguistic structured sequence of adjectives see NM1 above), Nationality adjectives can surface to the left of the head noun (e.g., Germanic, Slavic, Standard Greek) from languages in which they cannot (e.g. Walloon)

## Manifestations

Is any of the following true in the language?
There are adjectives of origin/nationality preceding the noun in discourse-neutral contexts
ex: a (nice new blue) French dress

| ćv $\alpha$ | ( $\omega$ ¢ ióo кরlvoúpylo | $\mu \pi \lambda \varepsilon)$ | $\gamma \alpha \lambda \lambda ı \kappa o ́$ | ¢о́рє $\mu \alpha$ | GREEK |
| :---: | :---: | :---: | :---: | :---: | :---: |
| a | nice new | blue | French | dress |  |
| 'a (nice new blue) French dress' |  |  |  |  |  |

NGL, $\pm \mathbf{N}$ under GenL
Distinguishes languages in which the head noun surfaces to the right of a Genitive in the GenL post-adjectival position (e.g., Latin, Classical Greek, Finnish, Lithuanian) from languages in which the noun always surfaces to the left of such a Genitive position (e.g., Standard Greek, Slavic, Celtic, German, Icelandic)

## Manifestations

Is any of the following true in the language?
There are non-adpositional genitives occurring between a structured adjective and a noun


```
jatkuva papereitten tarkastus FINNISH
constant.NOMS documents.GENpl examination.NOMS
'a/the constant examination of the documents'
```


## ACM, $\pm$ class MOD

Distinguishes languages in which the head noun surfaces to the right of all structured adjectives except for those which can identify some established natural classes of objects (e.g. Polish) from languages in which it surfaces to the right even of these adjectives (e.g., Slovenian, Serbo-Croatian, Icelandic, German)

## Manifestations

Is any of the following true in the language?
a) There are postnominal adjectives denoting an established entity occurring between a head noun and a non-adpositional genitive

| ex: | Polski bank narodowy tego | miasta | POLISH |
| :--- | :--- | :--- | :--- | :--- |
|  | Polish Bank National this-GEN |  |  |
|  | 'The Polish National Bank of this city' |  |  |

b) There are postnominal adjectives denoting an established natural kind while the same adjective is regularly qualifying in prenominal position

```
ex: niedźwiedź biaty [classifying] POLISH
    bear white
    'a polar bear' ('an animal which belongs to the species Ursus maritimus')
    biaty niedźwiedź [qualifying]
    white bear
    'a white bear' ('a bear that happens to be white') (from Rutkowski and Progovac 2005, 102)
```


## DSN, $\pm$ def spread to $\mathbf{N}$

Distinguishes languages where definite articles affixed on the head noun, under certain conditions, can double an overt free-standing demonstrative/definite article (e.g., Norwegian, Faroese) from languages in which an affixed article on the head noun can never cooccur with an overt determiner (e.g., Danish, Icelandic, Romanian, Bulgarian)

## Manifestations

Is any of the following true in the language?
a) There is a definiteness suffix on the noun even when a non-suffixal article also occurs
ex: Jeg motte den unge loerer-en NORWEGIAN
I met the young teacher-the
'I met the young teacher'

```
Jeg motte loerer-en
I met teacher-the
'I met the teacher'
```

b) There is a definiteness suffix on the noun even when a demonstrative occurs preceding it

| ex. Jeg møtte denn leerer-en | NORWEGIAN |
| :--- | :--- | :--- |
| I met this teacher-the |  |
| 'I met the young teacher' |  |

## DSA, $\pm$ def spread to ARR

Distinguishes languages in which the definite article of a nominal is reduplicated on adjectives occurring as reduced relative clauses (e.g., Classical and Standard Greek) from languages in which free reduced relatives occur without this reduplication (e.g., Romance, Wolof)

## Manifestations

Is any of the following true in the language?
When the whole nominal argument is understood as definite, definite articles are replicated on the adjectives realized as reduced relative clauses

| ex: | $\delta i \dot{\alpha} \beta \alpha \sigma \alpha$ | $\tau o$ | $\beta \imath \beta \lambda i o$ | to | $\omega \rho \alpha i o$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | read-1S | the book the | beautiful | GREEK |  |
|  | 'I read the beautiful book' |  |  |  |  |
|  | $\delta i \dot{\alpha} \beta \alpha \sigma \alpha$ | $\tau o$ | $\omega \rho \alpha i o$ | $\beta \imath \beta \lambda i o$ |  |
|  | read-1S $\quad$ the beautiful | book |  |  |  |
|  | 'I read the beautiful book' |  |  |  |  |

## DSS, $\pm$ def spread to structured categories

Distinguishes languages in which the definite article of a nominal is reduplicated on all structured adjectives and on the head noun, if the latter is not already so marked as the first word of the phrase, (e.g., Asia Minor Greek, Semitic) from languages in which no such reduplication occurs (e.g., Germanic, Romance)

## Manifestations

Is any of the following true in the language?
When the whole nominal argument is understood as definite, definite articles are replicated on the head noun and its adjectival modifiers, regardless of their position

```
ex: ta-tría ta-ka ta-peškíra
PHARASIOT GREEK
    the-three the-nice the-towels
    'the three nice towels'
```

```
ra?ay-tu s-sayaarat-a l-?almaaniyat-a z-zarqaa?-a l-jadiidat-a
saw-I the-car-ACC the-German-ACC the-blue-ACC the-new-ACC
l-jayyidat-a
the-nice-ACC
'I saw the nice new blue German car' ARABIC
```


## DOC, $\pm$ def on cardinals

Distinguishes languages in which an affixed definite article may also be attached to cardinal numerals (e.g., Bulgarian) from languages in which it cannot be attached to cardinals (e.g., Romanian)

## Manifestations

Is any of the following true in the language?
There are definiteness suffixes occurring on prenominal cardinal numerals
ex: tri-te knigi
BULGARIAN
three-the books

## NEX, $\pm$ Proper names in D

Distinguishes languages in which some proper names can surface in the position of determiners (e.g., Italian, French, Basque) from languages in which some form of overt determiner is required with all proper names (e.g., Italiot Greek)

## Manifestations

Is any of the following true in the language?
There are proper names occurring with no article in argument function

| ex: | ho incontrato | Mario |
| :--- | :--- | :--- |
|  | have met | Mario |
|  | 'I met Mario' |  |
|  | ho visitato | Roma |
|  | have visited | Rome |
|  | 'I visited Rome' |  |

## PEX, $\pm$ Personal proper names in D

Distinguishes languages in which some personal names can surface in the position of determiners (e.g., Italian, French, Basque) from languages in which some form of overt determiner is required with all personal names (e.g., Salentino Romance)

## Manifestations

Is any of the following true in the language?

There are personal names occurring with no article in argument function

| ex: | ho | incontrato | Mario | ITALIAN |
| :--- | :--- | :--- | :--- | :--- |
|  | have.1S met | Mario |  |  |
|  | 'I met Mario (male), |  |  |  |
|  | ho $\quad$ incontrato | Maria |  |  |
|  | have.1S met | Maria |  |  |
|  | 'I met Maria (female)' |  |  |  |

## FEX, $\pm$ Partial personal proper names in D

Distinguishes languages in which personal names can surface in the position of determiners (e.g., Italian, French, Basque) from languages in which some form of overt determiner is required with selected classes of personal names, typically feminine (e.g., some Romance varieties)

## Manifestations

Is any of the following true in the language?
Female personal names occur with no article in argument function

```
ex: ho incontrato Maria
    have.1S met Maria
    'I met Maria (female)'
```


## PDC, $\pm$ D-checking possessives

Distinguishes languages in which the atomizing and definiteness-assigning functions borne out by definite articles can be played by personal pronouns used as adnominal arguments (henceforth possessives), which then cannot cooccur with a visible determiner (e.g., French mon livre vs. *le mon livre) from languages in which a visible determiner cooccurs with possessives and is actually required in argument function (e.g., Italian; il/un mio libro vs. *mio libro)

## Manifestations

Is any of the following true in the language?
a) Possessives occur in nominal arguments with definite interpretation and no visible determiner

```
ex: mi nuevo libro
SPANISH
    my new book
    'my new book'
```

b) Postnominal possessives in nominal arguments with non-definite interpretation can have non-contrastive focus/"neutral" reading (applies to languages with prenominal structured adjectives and prenominal possessives)

```
ex: um livro meu
PORTUGUESE
a book my
'a book of mine'
o meu livro
the my book
'my book'
```


## PCL,$\pm$ clitic possessives

Distinguishes languages in which possessives are licensed as bound morphemes cliticizing on the head noun, or a stressed modifier of the noun, without agreement in features with it and with a distribution recognizably different from that of full genitive arguments (e.g., Greek, Farsi, Pashto, Wolof) from languages in which this possibility does not arise (e.g., Germanic, Romance)

## Manifestations

Is any of the following true in the language?
a) Possessives are realized as immediately attached to a prenominal modifier, do not agree in $\varphi$-features with the head noun, and can cooccur with non-pronominal non-adpositional genitives

| ex: | $\tau o$ | $\pi \rho o ́ \tau o-\mu o v$ | $\pi o \rho \tau \rho \varepsilon ́ \tau o$ | $\tau \eta \varsigma$ | Máias |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | the.N.S | first.N.S-1S.GEN | portrait.N.S | the.F.GEN.S | Maria.f.GEN |
|  | 'My first portrait of Maria' |  |  | GREEK |  |

b) There are possessives realized as immediately adjacent to the head noun, not agreeing in $\varphi$ features with it, and with no linker. (only applies to languages that have argument linkers, $+L K A)$

```
ex: sama tééré (bi) WOLOF
    1S book (def det)
    'My book'
sa tééré (bi)
2S book (def det)
'Your book' (cf. also: tééré-am 3S.POSS = his/her; sunu tééré 1P= our)
```


## APO, $\pm$ adjectival possessives

Distinguishes languages in which possessives have the distribution and often the agreement features of adjectives (e.g., Italian, Spanish, Latin, Ancient Greek, Slavic) from languages in which this kind of form/distribution is not found (e.g., English, Romanian)

## Manifestations

Is any of the following true in the language?
a) There are postnominal possessives co-occurring with articles/demonstratives/quantifiers (every', 'some')/numerals and introduced/not introduced by the same morpheme(s) as postnominal adjectives

| ex: | $a$ <br> the.F.S | makina | car.F.S |
| :--- | :--- | :--- | :--- | | nova |
| :--- |
| new.F.S |$\quad$ SICILIAN (RAGUSA)

b) There are prenominal possessives and prenominal adjectives that follow articles/demonstratives/quantifiers (every', ‘some')/numerals


## WAP, $\pm$ Wackernagel possessives

Distinguishes languages that exhibit possessives licensed as bound morphemes enclitic on the determiner (essentially as $2^{\text {nd }}$ position clitics) without agreement in features with the noun (e.g., several Romance dialects of Sicily) from languages in which this possibility does not arise (e.g., other Romance and Greek varieties of Italy).

## Manifestations

Is any of the following true in the language?
There are prenominal possessives not agreeing in phi-features with the head noun and occurring to the left of cardinal numerals and after a visible determiner

```
ex: u mo libbru / a mo kasa SICILIAN (RAGUSA)
    the.M.S my book.M.S the.F.S my house.F.S
    'my book' / 'my house'
    i mo tri llibbra/ i mo tri kkasi
    the.P my three book.P/ the.P my three house.P
    'my three books' / 'my three houses'
```


## AGE, $\pm$ adjectival genitive

Distinguishes languages that productively form adjectives from proper and common nouns (like 'John, Mary, president etc.'), with the distribution and binding properties of adjectival possessives (e.g., Slavic languages, except for modern Polish) from languages in which this possibility does not arise (e.g., the rest of IE)

## Manifestations

Is any of the following true in the language?
a) Argument adjectives from proper and common nouns can be used with the role of internal argument of the head noun

```
ex: Van-ino ranenie
RUSSIAN
    Vanya-ADJ.GEN wounding
    `John's wounding'
```

b) Argument adjectives from proper and common nouns can bind non-null personal anaphoric/pronominal expressions, as genitives and possessives do

```
ex: Jovan-ovai priča o seb-ii SERBO-CROAT
    Jovan-POSS.ADJ story about self-LOC
    'Jovan's story about himself'
```


## OPK, $\pm$ null possessive licensing article with kinship nouns

Distinguishes languages in which a definite article introducing kinship nouns can be understood as a possessive pronoun (e.g., Scandinavian, Italian, Hebrew, Arabic) from languages in which this possibility does not arise (e.g., English, French, Slavic, Hungarian)

## Manifestations

Is any of the following true in the language?
A definite article occurring with a kinship noun and no visible possessive can license a (3rd person) understood pronoun that can be interpreted as bound

| ex: | Gianni è andato a trovare | il | nipote | ITALIAN |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Gianni is gone to visit | the | nephew |  |  |
| 'Gianni visited his nephew' |  |  |  |  |

## TSP, $\pm$ split deictic demonstratives

Distinguishes languages in which demonstratives appear with two separate parts, one occurring in the position of determiners, and the other, usually encoding deictic contrasts, typically merged in a lower structural position (e.g., French, some Romance dialects of Italy) from languages in which this possibility does not arise (Italian, Standard Greek, English, Hebrew, Basque)

## Manifestations

Is any of the following true in the language?
a) There are deictically neutral demonstratives formally distinct from those which encode deictic relations
ex: il trouva un champignon et fut étonné car ce champignon était très rare dans la région 'He found a mushroom and was surprised because this/that mushroom was very rare in the region' (Corblin 1985: 386)

FRENCH passez moi ce livre ci/là give me this book here/there 'give me this/that book'
b) Deictic demonstratives are realized as two separate words, one a copy of the other (the one at the boundary of the nominal possibly phonologically reduced)

| ex: ss' oma kwessa / ll' omə kwella | TERAMANO |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| DEM man DEM |  |  |
| 'that man (near you)' / 'that man' man DEM |  |  |

c) Deictically neutral demonstratives are realized as two separate words

| ex: | $k l a$ | $k a$ | $l e$ | $c o n$ | $a n$ | grand | gjarden |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | that.F.S | house.F.S | there | with a.M | big | garden |  |
|  | $l^{\prime}$ | $e$ | $k e$ | davsen |  |  |  |

3S.CL be.3S here closeby
'That house with a big garden is closeby' CASALASCO

## TDP, $\pm$ split demonstratives

Distinguishes languages in which demonstratives appear with two separate parts, one occurring in the position of determiners, and the other typically merged in a lower structural position, even when not encoding deictic meaning, (e.g., some Romance dialects of Northern Italy) from languages in which the demonstrative appears as "split" only when encoding deictic contrasts (e.g., French, Malagasy)

## Manifestations

Is any of the following true in the language?
Deictically neutral demonstratives are realized as two separate words

| ex: | $k l a$ | $k a$ | $l e$ | con an | grand | giarden |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| that.F.S | house.F.S | there | with a.M | big | garden |  |

## TDC, $\pm$ D-checking demonstratives

Distinguishes languages in which demonstratives can mark definiteness for the whole nominal and thus do not cooccur with definite articles (e.g., Germanic, Romance) from languages in which they always cooccur with a definite article (e.g., Greek, Celtic, Semitic)

## Manifestations

Is any of the following true in the language?
There are demonstratives occurring at the boundary of an articleless argument nominal phrase
ex: this book / that book
questo libro / quel libro
ITALIAN
this book / that book
'this book / that book'

## TSA, $\pm$ structured demonstratives (adjectival)

Distinguishes languages in which demonstratives can appear phrase-internally, among the positions of structured adjectives, (e.g., Celtic, Bulgarian, Romanian, Semitic) from languages in which demonstratives do not have the distribution of structured adjectives (e.g., Germanic, most of Romance, Greek)

## Manifestations

Is any of the following true in the language?
a) There are postnominal demonstratives occurring to the left of non-adpositional Genitives and/or PPs (applies to languages with postnominal adjectives and where adjectives are not realized as postnominal reduced relative clauses)

```
ex: l-mudarris-u häd\overline{a} li-l-walad-i ARABIC
    the-teacher-NOM this of-the-boy
    'this teacher of the boy'
```

b) Demonstratives can occur either to the right or to the left of articles/numerals (applies to languages with phrase-initial determiners where structured adjectives can be fronted to the left of $D$ )

| ex: | ja | poterjal-a | tri | te | karandaš-a | RUSSIAN |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | lost-F.S | three | those.ACC | pencil-S.GEN |  |
|  | 'I lost those three pencils' |  |  | (discourse anaphoric/*deictic) |  |  |
|  | ja | poterjal-a | te | tri | karandaš-a |  |
|  |  | lost-F.S | those | ACC three | pencil-S.GEN |  |
|  |  | those three p |  |  | ourse anaphoric |  |

c) Demonstratives can occur between an articulated noun and an adjective (applies to languages with phrase-initial determiners and phrase-initial enclitic definite articles)

```
ex: copil-u-l acest-a frumos
    child-EP.V-the.M.S this.M.S-a lovely.M.S
    'this lovely child'
                                    ROMANIAN
\begin{tabular}{lllll} 
kniga-ta onazi & chervena(-ta) ne ja xaresax & BULGARIAN \\
book-the that red(-the) & I didn't like & \\
'that red book I didn't like' & &
\end{tabular}
```


## TAR, $\pm$ unstructured demonstratives

Distinguishes languages in which demonstratives can appear in the position of reduced relative clauses (e.g., Spanish, Latin, Ancient Greek, Standard Greek, Indo-Iranian, Turkic, Mandarin, Cantonese, Japanese) from languages in which demonstratives do not have the distribution of reduced relatives (Germanic, most of Romance, Wolof)

## Manifestations

Is any of the following true in the language?
a) Demonstratives and adjectives/Genitives/relative clauses/numerals can be freely ordered
ex: el livro viejo/nuevo ese
the book old/new that
'that old/new book'
el livro ese viejo/nuevo
the book that old/new
'that old/new book'
(Battlori and Roca 2000: 246)
b) There are postnominal demonstratives occurring to the right of PPs

| ex: el livro (de matematicas) | ese/nuevo (de matematicas) | SPANISH |
| :--- | :--- | :--- | :--- | :--- |
| the book of mathematics |  |  |
| 'that/the new math book' | hat/newof mathematics <br> (adapted from Bernstein 2001: 15 and 25) |  |

c) Demonstratives can be fronted to the left of D (or numerals) (in languages with phraseinitial determiners where adjectives realized as postnominal reduced relative clauses can also be fronted to the left of $D$ )

| ex: | $\alpha v \tau o ́$ | тo | $\pi \varepsilon \delta i$ |  | GREEK |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | this.M.S | the.M.S | kid.M.S |  |  |
|  | 'this kid' |  |  |  |  |
|  | тo | $\psi i \lambda o ́$ | тo | $\pi \varepsilon \delta i$ |  |
|  | the.M.S | tall.M.S | the.M.S | kid.M.S |  |
|  | 'the tall |  |  |  |  |

## TLC, $\pm$ demonstratives in Loc

Distinguishes languages in which demonstratives that are not D-checking can appear in a dedicated boundary position to the left of the whole nominal argument (e.g., Ancient Greek, Arabic) from languages in which they cannot, and always occur in a lower adjectival position (e.g., Celtic, Hebrew)

## Manifestations

Is any of the following true in the language?
There are phrase-initial demonstratives

```
ex. hada l-mudarris-u l-hasan-u ARABIC
    this the-teacher-NOM the-nice-NOM
    'this nice teacher'
```


## TND, $\pm$ long distance D-checking demonstratives

Distinguishes languages in which demonstratives that can mark the definiteness of the nominal argument at a distance, i.e. from an internal position rather than surfacing with the distribution of determiners (e.g., Hebrew) from languages in which they surface in the position of determiners (e.g., Arabic, Irish, Welsh)

## Manifestations

Is any of the following true in the language?
There are demonstratives not occurring at the boundary of an articleless argument nominal phrase

```
ex. bayit/more ze shel Dan
HEBREW
    house/teacher this of Dan
```

    'this house of Dan's/this teacher of Dan's'
    
## TDA, $\pm$ split def on adjectival demonstratives

Distinguishes languages in which definiteness is spread to adjectival demonstratives, which must accordingly be accompanied by a copy of the definite article, like other adjectives (e.g., Hebrew) from languages in which demonstratives satisfy the doubling requirement through their intrinsic definiteness (e.g., Ancient Greek, Standard Greek, Arabic)

## Manifestations

Is any of the following true in the language?
Adjectival demonstratives are introduced by a copy of the definite article of the whole nominal phrase

```
ex. ha-bayit ha-nexmad ha-ze im shtey ginot HEBREW
    the-house the-nice the-that with two gardens
    'that nice house with two gardens'
```

TNL, $\pm$ DP under Loc
Distinguishes languages in which the whole nominal phrase including the article (if present in the language) only follows the demonstrative that marks its boundary (e.g., Hungarian, Finnish, Polish) from languages in which the whole nominal phrase may come to precede (e.g., French, Chickasaw) such demonstratives

## Manifestations

Is any of the following true in the language?
There are demonstratives occurring phrase-initially (and co-occurring with definite articles, if any)

| ex.tama mies <br> this.NOM man.NOM | FINNISH |  |  |
| :--- | :--- | :--- | :--- |
| 'this man' |  |  |  |
| * mies tama |  |  |  |
|  |  |  |  |
| $e z \quad a$ | kedves | öreg ember |  |
| this the kind | old man | HUNGARIAN |  |
| 'this kind old man' |  |  |  |


[^0]:    ex: the magazine that John bought/buys

