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Syntactic diversity and language learnability

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Appendix

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INSTRUCTIONS

1) This Appendix provide a protocol for the replicability of data collection and their coding as parameter states. The data (with minor adjustements) refer to the lists of parameters used in the following publications:

- Andrea Ceolin, Cristina Guardiano, Monica Alexandrina Irimia and Giuseppe Longobardi (2020) Formal syntax and deep history. Frontiers in Psychology 11: 488871.
- Patrícia Santos, Gloria Gonzalez-Fortes, Emiliano Trucchi, Andrea Ceolin, Guido Cordoni, Cristina Guardiano, Giuseppe Longobardi and Guido Barbujani (2020) More rule than exception: parallel evidence of ancient migrations in grammars and genomes of Finno-Ugric speakers. Genes 11, 1491.
- Andrea Ceolin, Cristina Guardiano, Giuseppe Longobardi, Monica Alexandrina Irimia, Luca Bortolussi and Andrea Sgarro (2021) At the boundaries of syntactic prehistory. Philosophical Transactions of the Royal Society B 376: 20200197.

2) **Section 1** contains a short description of the structure of the manifestations (1.1) and of their conditions of application (1.2), along with a glossary of some technical terms (1.3).

3) **Section 2** contains a short description of each parameter along with an updated list of its empirical manifestations.

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1: Introduction to parameters and manifestations

1.1. Formal structure of the manifestations

Each parameter is associated with one or more manifestations expressed in the form of existential statements that set its state to [+].

To set the relevant parameter, each manifestation is translatable into a YES/NO question asking about the truth of an existential statement of the type "Language L has / In language L, one finds an observable grammatical object (construction/morpheme/feature/etc.) α with property X", or a conjunction of two or more statements of this type.

Such questions generally obey the following properties:

1) YES answers can be provided just on the basis of positive evidence. We made sure that for every parameter there is at least one question that might be answered YES in some known language. This guarantees the minimal requirement of cognitive plausibility for that parameter, given that language learners can certainly access positive evidence.

2) one YES answer (i.e. one manifestation per parameter and per language) is sufficient to set a parameter's value unambiguously to [+]. In a language, all the manifestations of a parameter should co-vary across languages by definition. Thus, normally, one YES answer correlates with YES answers to all the questions for the same parameter. Yet, in several cases, the lack of an answer YES may just be the consequence of the absence of the relevant construction in a language due to independent conditions: namely, the combinations of other parameter values or the accidental lack of the relevant morpheme as an idiosyncrasy of the functional lexicon (ultimately Saussurean arbitrariness).

3) if no question relative to any manifestation of a certain parameter in a language receives an answer YES, the value [-] will be assigned by default to that parameter in that language. Therefore, [-] is the unmarked state of each parameter, while [+] is always chosen on the basis of positive evidence.

(**NB**: very occasionally a manifestation/question requiring negative evidence has been added to the others for the sake of easiness of parameter setting by a linguist interviewing a native speaker, but no parameter has been formulated as requiring just negative evidence to be set).

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1.2. Conditions of application of the manifestations/questions

The manifestations setting each parameter are so formulated as to be relevant only if the parameter needs to be set to (either of) the two alternative parameter states [+] or [-], i.e. if it is not independently neutralized in a certain language owing to the interaction with other parameter values (the state marked as [0] as a consequence of the implicational rules); if a parameter is implicationally neutralized in a certain language, the questions for that parameter in that language must be disregarded altogether: they would be irrelevant and in some cases misleading.

The list of the 94 parameters used in this work is contained in **Table 1** along with the implicational rules for each parameter. The table can also be downloaded at www.parametricomparison.unimore.it > Materials.

Each parameter in **Table 1** is conventionally identified by a progressive number (in the first column from the left) and by a combination of three capital letters (in the second column). The order of the parameters is motivated by the ease of expression of cross-parametric dependencies, which are so organized as to proceed top-down. The conditions that must hold for each parameter to be relevant (i.e. not neutralized to [0]) are indicated in the fourth column after the name of the parameter itself. They are expressed in a Boolean form, i.e., either as simple values of other parameters, or as conjunctions (written [,]), disjunctions ([*or*]), or negation ([¬]) thereof. In the implicational rules, parentheses are used to explicitly signify the order of embedding of disjunctions (which are all logically inclusive: *vel*, not *aut*) with respect to conjunctions. Thus, as an example of how to read the notation, the implicational condition of parameter 20 (NWD) should sound as follows: p20 (NWD) can be set (to either [+] or [-]) if and only if: p8 (FGP) is set to [+] and p9 (FSN) is not set to [+], or if and only if p14 (DGR) is set to [+] (or both disjoined conditions hold); otherwise it will be neutralized [0].

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	Label	Parameter	Implication(s)
1	FGM	± grammaticalized morphology	
2	FGA	± grammaticalized agreement	+FGM
3	FGK	± grammaticalized Case	+FGM
4	SPK	± grammaticalized (ultra)spatial Cases	+FGK
5	FGP	± grammaticalized Person	+FGM
6	FSP	± semantic Person	¬+FGP
7	FGN	± grammaticalized Number	+FGP
8	SCO	± spread group marker	+FGM, ¬+FGN
9	GDP	± grammaticalized distributive plurality	+FGM, ¬+FGN
10	FSN	± Number spread to N	+FGN
11	FNN	± Number on N	+FSN
12	FGT	± grammaticalized temporality	
13	FGG	± grammaticalized Gender	+FGN
14	FSG	± semantic Gender	+FGN
15	CGB	± unbounded singular nouns	
16	FPC	± grammaticalized perception	
17	DGR	± grammaticalized Specified Quantity	+FGN, -FPC
18	DGP	± grammaticalized text anaphora	¬+DGR
19	CGR	± long distance Specified Quantity	-CGB, +DGR
20	NWD	± long distance reference	-FSN or +DGR
21	FVP	± variable Person	+FGA, -NWD
22	DGD	± grammaticalized distality	-FSN or +DGR
23	DPQ	± free null partitive Q	+FNN, -CGB
24	DCN	± article-checking N	-FSN or +DGR
25	DNN	± null-N-licensing art	-DCN
26	DIN	± D-controlled inflection on N	+FSN
27	FGC	± grammaticalized classifier	¬+FGN
28	FGE	± grammaticalized bounding classifier	-FGM, +FGC
29	FCN	± Person spread to predicate nouns	+FGP
30	HMP	± NP-heading modifier	
31	ARR	± free reduced relatives	
32	GCN	± head-marking with Genitive	
33	GFN	± Person controlled marking	+FGP, +GCN
34	GFP	± agreement with all pronouns	+GFN
35	GP3	± agreement with all 3rd person DPs	+GFP
36	GEI	± Genitive inversion	+GP3
37	CSE	± full c-selection	
38	EAL	± ergative alignment	+FGK, +CSE
39	CAL	± clausal alignment	+FGK, ¬+GP3, +CSE, -EAL
40	LKA	± argument linker	
41	LKO	± oblique linker	-LKA
42	LKP	± predicative linker	
43	DMP	± def matching pronominal possessives	+DCN
44	DMG	± def matching Genitives	+DMP
45	GUN	± uniform Genitive	(-GCN or (+GFP, -GP3)), -CAL, -LKA
46	GAD	± free Gen	-LKA, ¬+GUN
47	GFL	± GenL	(-GCN or +GFN), ¬+GP3, ¬+EAL, ¬+GUN
48	PGL	± partial GenL	-GFL
49	GGH	± generalized GenH	-CGR, +NWD, ¬+GFP, ¬+GUN
50	GSI	± grammaticalized inalienability	
51	ALP	± alienable possession	-GSI
52	GIT	± Genitive-licensing iteration	
53	UST	± unstructured modifiers	+ARR
54	GPC	± Gender-polarity cardinals	+FGG
55	PSC	± plural spread from cardinal quantifiers	+FSN, ¬+UST, ¬+GPC
56	PCA	± plural spread through cardinal adjectives	-PSC
57	PMN	± Person marking on numerals	+GFP
58	RHM	± Person marking on the head of relative clauses	+FGP
59	FRC	± finite relative clauses	
60	NRC	± participial relative clauses	+FRC
61	DOR	± definiteness on relatives	+DGR, +FRC
62	FFP	± feature spread to particles	+FGN, ¬+GFP, (+LKA or +LKP or +LKO or (-GUN, ¬-GAD))
63	NUP	± NP under non-genitive arguments	+FGP, (+CSE or +LKA or +LKO)
64	PNP	± complement under P	+FGP, (-CSE or -NUP)
65	NUD	± NP under D	+FGP
66	NUC	± N under cardinals	¬+UST, +PNP, +NUD
67	NM1	± N under M1 As	+NUC
68	EAF	± fronted high As	-NM1
69	NM2	± N under M2 As	+NM1
70	NUA	± N under As	+NM2
71	NGL	± N under GenL	((+FGP, +UST) or +NUA), (+GUN or +GFL or +PGL)
72	ACM	± class MOD	-ARR, -NGL
73	DSN	± definiteness spread to N	+DCN
74	DSA	± definiteness spread to ARR	+DGR, +ARR
75	DSS	± definiteness spread to structural categories	+DGR, (-ARR or +DSA)
76	DOC	± definiteness on cardinals	-NWD, +DCN, +NUC
77	NEX	± proper names in D	(-FSN or -CGR), -NWD, ¬+NUA
78	PEX	± personal proper names in D	+NEX
79	FEX	± partial personal proper names in D	+PEX
80	PDC	± D-checking possessives	+DGR, (¬-CGR or -NWD), ¬+GFP
81	PCL	± clitic possessives	+FGP, ¬+GFP, ¬+DMP, ¬+UST, (-PDC or ¬+DGR)
82	APO	± adjectival possessives	¬+GFP, ¬+UST
83	WAP	± Wackernagel possessives	¬+DMP, +NUD, -PDC, (-APO or (-NM1, +APO))
84	AGE	± adjectival genitive	+APO
85	OPK	± null possessive licensing article with kinship nouns	+DGR, -GSI
86	TSP	± split demonstratives	-FSN or +DGR
87	TDP	± split non-deictic demonstratives	+TSP
88	TDC	± D-checking demonstratives	-TSP
89	TSA	± structured demonstratives (adjectival)	¬+UST, ¬+TSP, ((+DGR, +NM1) or (-ARR, -NM1) or -NUC)
90	TAR	± unstructured demonstratives (adjectival)	+ARR, ¬+TSP
91	TLC	± demonstratives in Loc	¬+TSP, ¬+TDC, (+TSA or (+PNP, +TAR))
92	TND	± long distance D-checking demonstratives	+CGR, (+TSA or +TAR)
93	TDA	± definiteness spread to adjectival demonstratives	(+DSA or +DSS), (+TSA or +TAR)
94	TNL	± DP under Loc	+TSP or +TLC or (¬+TSP, ¬+TDC, ¬+TSA, ¬+TAR)

Table 1

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1.3. GLOSSARY of some technical usages

Article

It is used to refer to a determiner that does not express any meaning other than (in)*definiteness* or just φ-features, and sometimes even less interpretable content (expletive articles). In some languages, articles (normally phonologically unstressed) occur as morphosyntactically free morphemes, in others they are bound morphemes affixed to the head noun (or an adjective).

Atomizing

The process shifting the interpretation of a nominal argument from an *unbounded* reading (a free variable, indirectly bound) to a *bounded* one (a variable bound by a specific determiner).

Bare noun (bare nominal argument)

A noun (or its extended maximal phrase) not introduced by any overt *determiner* in the canonical Determiner position nor with a determiner-like (*atomizing*) interpretation derived at a distance from other elements within the nominal phrase. Bare nouns in this sense may contain modifiers like arguments, adjectives or relative clauses, provided they do not contribute an atomizing interpretation.

Bounded vs. unbounded reading

A nominal argument will be said to have an unbounded reading when it is at the same time obligatorily indefinite, scopeless, and atelic. This reading is typically instantiated in European languages by bare plural and mass nouns and in many Turkic and Uralic languages by bare singulars. Nominal arguments introduced by an overt determiner normally have a bounded reading, which specifies the quantity of individuals denoted and *atomizes* the kind expressed by the head noun.

(morphological) Case

In nominal morphology it is important to have a demarcation criterion between inflectional (*lato sensu,* i.e. including agglutinative morphology) Case proper and pre-/post-positional words. Two criteria are conceivable, as a first approximation:

a. many prepositional languages have Case *suffixes*, so that they are easily distinguished positionally from phrase-initial functional words like prepositions

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b. for postpositional languages, a demarcation criterion between Case-suffixes and postpositions is necessary, however. A distinction can be made if:

1) the suffix occurs on a head noun or adjective before some other phrase-internal word (another adjective, a relative clause…)

or

2) the suffix occurs both on the head noun and some other phrase-internal category (adjective, quantifier, demonstrative) agrees with it through a corresponding suffix

or

3) the suffix is only on the head noun but, in the morphological structure, it is more word-internal than other noun suffixes, such as e.g. of number, possessed status etc.

Classifier

A morpheme connecting a cardinal numeral to a non-plural head noun in a nominal phrase interpreted as count.

Definite(ness)

The interpretation of the denotatum of a nominal phrase as being considered maximal in the shared domain of discourse, in many languages provided by designated *articles*, by demonstratives, *possessives,* or inherited even at a distance from certain *Genitives*. Definite arguments can be specific (i.e. assume the existence of a denotatum) or non-specific, and definiteness and specificity must by no means be confused.

Determiner

A functional morpheme (in many languages instantiated by an article, a demonstrative, a possessive, or a quantifier) normally occurring in, or connected to, a position at the highest boundary of a nominal phrase, able to shift the latter phrase into an individual-denoting expression and often also to ensure an *atomizing* function (from an unbounded to a *bounded* interpretation of the nominal). In most languages there are at least some instances of phonologically null determiner positions, possibly interpreted at a distance from other elements within the nominal phrase.

Genitive (genitive)

Genitive (with capitalized initial as a noun, but spelt with lower-case initial when used as an adjective) refers to the abstract Case considered assigned to the direct arguments of a head

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noun (those normally expressing the possessor, agent and theme relation). It must not be confused with just morphological Case: direct adnominal arguments realized as adpositional phrases, with inflectional marking or with no marking at all will all be considered Genitives in this sense.

Noun modifier

Any constituent within the maximal phrase of a head noun beyond the thematic arguments of the head noun and the elements occupying the position of determiners or performing an *atomizing* function at a distance from it.

phi-features

Any subset of person, number, gender and Case specifications in a language.

Phrase boundary

In principle the two (left- and right-ward) external edges of a nominal phrase. In practice the expression is used to refer to the one where the D position occurs in the language (initially in most languages, but clearly finally in such languages as Basque or Wolof). Notice that potentially floating quantifiers (such as those meaning 'all') and in certain languages even demonstratives may occur to the left of definite determiners without affecting the D-initial status of nominal phrases, i.e. the identification of a left boundary.

Possessive

A personal pronoun (or reflexive) expressing a genitive argument of a head noun if and only if it has a form different from that used to realize non-pronominal genitive arguments.

Speech role

It refers to the semantic interpretation of a nominal phrase as denoting the speaker(s), the hearer(s), both, or any individual other than the above. It is encoded as the so-called person feature in many languages

Structured adjectives

Adnominal adjectives occur in most languages (also) with a distribution separate from that of modifiers such as relative clauses. In this case they respect a certain fixed order when they appear before the head noun, but occur either in the same or in reverse order if they

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superficially appear after the noun. These adjectives are called structured. In those languages/constructions in which adjectives can or must appear with the distribution of relative clauses they appear in freer order and will be considered reduced relative clauses.

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

FGM, ± 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) The language has roots which take different affixes/phonological alternations encoding different closed-class interpretable/grammatical properties (Tense, Aspect, Number, Gender, Gradation, Case, etc.)

ex: *cat-cats*
sing-sang

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FGA, ± grammaticalized agreement

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

Manifestations

Is any of the following true in the language?

a) One finds alternations where a feature occurring on a word takes its value from ("agrees with", "concords with") another occurrence of the same feature on another word

ex: *this cat - these/those cats*

il	*gatto*	*nero*	ITALIAN
the.M.SG	cat.M.SG	black.M.SG	
'the black cat'			
la	*gatta*	*nera*	
the.F.SG	cat.F.SG	black.F.SG	
'the black she-cat'			
i	*gatti*	*neri*	
the.M.PL	cat.M.PL	black.M.PL	
'the black cats'			

I like - she likes

tu	*canti*	ITALIAN
2SG.NOM	sing.2SG	
'you sing'		
voi	*cantate*	
2PL	sing.2PL	
'you-guys/y'all sing'		

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FGK, ± grammaticalized Case

Distinguishes languages where the morphology of nouns, pronouns, and/or determiners varies according to their being subjects/agents or objects or oblique complements (e.g., English, German, Hungarian, Japanese, Archi) from languages where such alternations are not attested (e.g., Wolof, Garifuna)

Manifestations

Is any of the following true in the language?

a) The morphology of personal or relative pronouns occurring as arguments varies according to their being subjects/agents or objects or oblique complements

ex: *I like the teacher*
the teacher likes me

b) In nominal arguments, the morphology of quantifiers, demonstratives, and/or definite/indefinite articles varies according to the argument being a subject/agent or an object or an oblique complement

ex:	*der*	*König*	*traf*	*die*	*Gäste*	GERMAN
	the.NOM	king	met	the	guests	
	'the king met the guests'					
	Ich	*habe*	*den*	*König*	*getroffen*	
	1SG.NOM	have	the.ACC	king	met	
	'I met the king'					

c) In nominal arguments, the morphology of nouns varies according to the argument being a subject/agent or an object or an oblique complement

ex:	*ο*	*βασιλιάς*	*έφυγε*	GREEK
	o	*vasiliàs*	*éfiγe*	
	the.NOM	king.NOM	leave.3SG.PST	
	'the king has left'			
	γνώρισα	*τον*	*βασιλιά*	
	gnórisa	*ton*	*vasiliá*	
	meet.1SG.PST	the.ACC	king.ACC	
	'I met the king'			

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SPK, ± grammaticalized (ultra)spatial Cases

Distinguishes languages that mark nouns, pronouns, adjectives and/or determiners for morphological Cases encoding both simple spatial meanings (stative location, direction, source) and some more complex ones (e.g., Hungarian, Finnish, Udmurt, Even, Evenki) from languages that do not (e.g., English, Russian, Latin, Arabic)

Manifestations

Is any of the following true in the language?

a) The language has morphological Case distinctions expressing spatial relations more complex than 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'

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FGP, ± grammaticalized Person

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

Manifestations

Is any of the following true in the language?

a) One finds morphological alternations on the verb that depend on the speech role of the subject

ex: *I am leaving*
you are leaving
Mary/she is leaving

b) One finds speech-role sensitive clitics that double the subject of the verb

ex: (*ti*) *te* *ga* *magnà* TRIESTINO
2SG 2SG.CLI have eaten
'you have eaten'

Mario */Maria* *el/la* *ga* *magnà*
Mario.M.SG Maria.F.SG 3SG.M.CLI/3SG.F.CLI have eaten
'Mario/Maria has eaten'

Mario *e* *Maria* *i* *ga* *magnà*
Mario.M.SG and Maria.F.SG 3PL.CLI have eaten
'Mario and Maria have eaten'

c) One finds 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

d) One finds overt resumptive items in (direct or indirect) object function

ex: *a* *Gianni* *gli* *ho* *regalato* *una* *penna* ITALIAN
to Gianni 3SG.M.DAT.CLI have.1SG given a.F pen.F.SG
'I gave a pen to Gianni'

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e) One finds 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 likes him$_i$

f) Speech-role-designating items precede adjectives that are prenominal when a noun is present

ex: *some young scholars participated in the project*
we young are all influencers now

a	*krízis*	*aggaszt-ott-a*	*a*	*magyar*	*embere-ek-et*
the	crisis	made.anxious-PST-DEF	the	Hungarian	people-PL-ACC

'the crisis made Hungarian people anxious'

a	*krízis*	*aggaszt-ott*	*mink-et*	*magyar-ok-at*
the	crisis	made-anxious-PST	1PL-ACC	Hungarian-PL-ACC

'the crisis made us Hungarians anxious' HUNGARIAN

g) The language has no article, 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*	*książki*	POLISH
1SG.POSS	three	book.PL	

'my three books' = only definite interpretation (Rutkowski 2007)

trzy	*moje*	*książki*
three	1SG.POSS	book.PL

'three books of mine' = indefinite interpretation (Rutkowski 2007)

h) One finds speech-role-designating morphemes alternating between a stressed and a clitic form

ex:

Claudio	*lo*	*odia*	ITALIAN
Claudio	3SG.ACC.CL	hate.3SG	

'Claudio hates him'

Claudio	*odia*	*lui*
Claudio	hate.3SG	3SG.ACC

'Claudio hates him' = contrastive

i) 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

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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
REFL	fake.3SG	doctor.SG	

'He pretends to be a doctor'

il	/	*un*	/	*quel*	*dottore*	*è*	*scomparso*
the.M.SG		a.M		that.M.SG	doctor.SG	be.3SG	disappeared

'The/A/That doctor has disappeared'

** dottore è scomparso*

j) 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

si	*comportano*	*da*	*Juventus*	ITALIAN
REFL	behave.3PL	as	Juventus	

'They act like Juventus'

la	*Juventus*	*è*	*insopportabile*
the.F.SG	Juventus	be.3SG	unbearable.SG

'Juventus is unbearable'

**Juventus è insopportabile*

k) Nominal arguments with understood maximality denotation (definiteness) are overtly marked as such (typically by the 'definite article', or some other source of definiteness, e.g. demonstratives, genitive/possessive arguments)

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)*

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FSP, ± 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) One finds morphological alternations on reflexives depending on the speech-role of their antecedents

ex: *wo* *chaoyue-le* *wo-ziji* MANDARIN
SPEAKER outdo-PERF SPEAKER-REFL
'I outdid myself'

ni *chaoyue-le* *ni-ziji*
ADDRESSEE outdo-PERF ADDRESSEE-REFL
'you (sg) outdid yourself'

Mali *chaoyue-le* *ta-ziji*
Mary outdo-PERF NONPARTICIPANT-REFL
'Mary outdid herself'

b) The language has a system of personal pronouns single-membered per each speech-role, with a dedicated morpheme encoding the non-uniqueness of the referent at least for some speech-roles

ex: *wo,* *ni,* *ta* MANDARIN
SPEAKER ADDRESSEE NONPARTICIPANT
'I, thou, he/she/it'

wo-men, *ni-men,* *ta-men*
SPEAKER-GROUP ADDRESSEE-GROUP NONPARTICIPANT-GROUP
'we, you (pl), they'

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FGN, ± 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., Kuikuro, Mandarin, Cantonese, Japanese)

Manifestations

Is any of the following true in the language?

a) One finds morphological alternations on nominal arguments (on the head noun or a definite article/demonstrative/quantifier/adjective) that oppose singular to non-singular interpretation

ex:	*il*	*gatto*	*(miagola)*	ITALIAN
	the.M.SG	cat.M.SG	meow.3SG	
	'the cat (meows)'			
	i	*gatti*	*(miagolano)*	
	the.M.PL	cat.M.PL	meow.3PL	
	'(the) cats (meow)'			

b) One finds morphological alternations on the verb that depend on the singular/non-singular interpretation of the subject

ex:	*il*	*gatto*	*miagola*	ITALIAN
	the.M.SG	cat.M.SG	meow.3SG	
	'the cat meows'			
	i	*gatti*	*miagolano*	
	the.M.PL	cat.M.PL	meow.3PL	
	'(the) cats meow'			

c) Within nominal arguments, one finds morphological alternations on adjectives that depend on the singular/non-singular interpretation of the noun (or of the definite article/demonstrative/quantifier)

ex:	*il*	*gatto*	*bianco*	*(miagola)*	ITALIAN
	the.M.SG	cat.M.SG	white.M.SG	meow.3SG	
	'the white cat meows'				
	i	*gatti*	*bianchi*	*(miagolano)*	
	the.M.PL	cat.M.PL	white.M.PL	meow.3PL	
	'(the) white cats meow'				

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d) One finds morphological alternations on 3rd person reflexives that depend on the singular/non-singular interpretation of their antecedents

ex: *the boy likes himself*
the boys like themselves

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SCO, ± spread group marker

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

Manifestations

Is any of the following true in the language?

a) One finds nominal arguments where the noun bears an overt marker for 'group reading' that is doubled on its modifiers

ex:	*itão-ko*	*itütü-ko*	KUIKURO
	woman-GROUP	nice-GROUP	
	'nice women'		
	itão-ko	*hesini-ko*	
	woman-GROUP	ugly-GROUP	
	'ugly women'		

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GDP, ± 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?

a) In sentences containing an argument distributed over by another quantifying argument, the morpheme which functions as a marker of the distributive reading occurs both on the quantified and on the quantifying nominal

ex:	*haksayng-(tul)-i*	*phwungsen*	*hana-lul*	*sa-ss-ta*	KOREAN
	student-GROUP-NOM	balloon	one-ACC	buy-PST-DECL	
	'the students bought a balloon'				
	haksayng-tul-i*	*phwungsen*	*hana-lul-tul***	*sa-ss-ta*	
	student-GROUP-NOM	balloon	one-ACC-GROUP	buy-PST-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.

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FSN, ± Number spread to N

Distinguishes languages that may mark Number distinctions on nouns (e.g., French, English, Italian) from languages that mark Number distinctions only on determiners (e.g., Basque, Wolof)

Manifestations

Is any of the following true in the language?

a) The language has nouns that bear variable number morphology

ex: *il* *gatto* *(miagola)* ITALIAN
the.M.SG cat.M.SG meow.3SG
'the cat (meows)'

i *gatti* *(miagolano)*
the.M.PL cat.M.PL meow.3PL
'(the) cats (meow)'

adopter *un* *animal* *est* *une* *responsabilité* FRENCH
adopt.INF a.M animal.M.SG be.3SG a.F responsibility.F.SG
'to adopt a pet is a responsibility'

adopter *des* *animaux* *est* *une* *responsabilité*
adopt.INF of.the.M.PL animal.M.PL be.3SG a.F responsibility.F.SG
'to adopt pets is a responsibility'

b) One finds bare nouns in (at least some) argument function

ex: *ho* *bevuto* *acqua* ITALIAN
have.1SG drunk water.F.SG
'I drank water'

ho *incontrato* *studenti* *per* *tutto* *il* *giorno*
have.1SG met student.M.PL for all.M.SG the.M.SG day.M.SG
'I have been meeting students all day long'

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FNN, ± Number on N

Distinguishes languages that have pervasive pronounced 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) The language has 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
have.1SG drunk water.F.SG
'I drank water'

ho	*incontrato*	*studenti*	*per*	*tutto*	*il*	*giorno*
have.1SG	met	student.M.PL	for	all.M.SG	the.M.SG	day.M.SG

'I have been meeting students all day long'

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FGT, ± 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?

a) The language has a dedicated bound morpheme that, when attached to nouns referring to natural kinds (animals, people, plants, …) and material objects, signals 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' (adapted from Franchetto & Thomas 2016)

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FGG, ± 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) One finds morphological alternations on articles/demonstratives/quantifiers that are controlled by the gender/noun class of the noun

ex: *il* *cucchiaio* ITALIAN
the.M.SG spoon.M.SG
'the spoon'

questo *cucchiaio*
this.M.SG spoon.M.SG
'this spoon'

un *cucchiaio*
a.M spoon.M.SG
'a spoon'

la *forchetta*
the.F.SG fork.F.SG
'the fork'

questa *forchetta*
this.F.SG fork.F.SG
'this fork'

una *forchetta*
a.F fork.F.SG
'a fork'

b) One finds morphological alternations on NP-modifying adjectives that are controlled by the gender/noun class of the noun

ex: *il* *cucchiaio* *pulito* ITALIAN
the.M.SG spoon.M.SG clean.M.SG
'the clean spoon'

la *forchetta* *pulita*
the.F.SG fork.F.SG clean.F.SG
'the clean fork'

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FSG, ± 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., Hungarian, Turkish, Even, Wolof)

Manifestations

Is any of the following true in the language?

a) The language has distinct 3rd person pronominal forms depending on the sex/animacy of the referent

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

everybody praised the actor: he is excellent
everybody praised the actress: she is excellent
everybody praised the movie: it is excellent

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CGB, ± 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, one finds bare singular count nouns with an indefinite number-neutral reading occurring in the object position of an atelic predicate

ex: *a* *gyerek-ek* *almá-t* *szed-nek* HUNGARIAN
DEF child-PL apple.SG-ACC pick-INDEF.3PL
'the children are picking apples (=apple-picking)'
(adapted from Kenesei et al 1998: 330)

anu *puure* *din* *cuuhaa* *pakaRtii* *rahii* HINDI
Anu whole day mouse.SG catch.IMP PROGR
'Anu kept catching mice (different ones) the whole day' (adapted from Dayal 2011)

A: *John* *enna* *velai* *seigiraan?* TAMIL
John what work does
'What is John's job?'
B: *avan* *seerundhu* *virkindraan*
3SG car.SG sells
'He sells cars'

b) In a language without grammaticalized Number, bare nouns in subject position have a definite reading, while the indefinite, non presuppositional, non-numeral reading is marked by a dedicated morpheme

ex: *gou* *yao* *guo* *malo* MANDARIN
dog want cross road
'the dog wants to cross the road'
(cannot mean: 'A dog wants to cross the road')

you *gou* *yao* *guo* *malu*
INDEF dog want cross road
'a dog/some dogs want(s) to cross the road'

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FPC, ± grammaticalized perception

Distinguishes languages in which 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?

a) 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 ninyoGo-di
M-PERC water-NOMINALIZER
'a/the (unit of) water' (in a horizontally extended container/layer/vessel)
(Sandalo & Michelioudakis 2016: 7-8)

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DGR, ± 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) The language has an overt marker found with nominal arguments having a definite interpretation (= with maximal reading) denoting entities introduced in the domain of discourse but not directly mentioned; this marker is different from those found with arguments having a non-maximal reading

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) The language has an overt marker found with argument common nouns denoting a maximal specific entity considered unique by the speaker and the hearer (hence with definite interpretation); this marker is different from those found when the entity is not considered unique

ex: *the king addressed his cabinet*
(as opposed to: *a king and three presidents attended the peace conference*)

the sun is the center of our solar system
(as opposed to: *There is a beautiful sun, not too hot*)

c) The language has an overt marker found with nominal arguments headed by a singular count noun and referring to the whole kind named by that noun; this marker is different from those used with non-maximal (i.e. indefinite) readings

ex: *the dodo is extinct*
(as opposed to: *I saw a dodo*)

d) The language has an overt marker found with nominal arguments headed by a mass/plural noun and referring to the whole kind named by that noun; this marker is different from those found with non-maximal (i.e. indefinite) readings

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ex: *i* *dinosauri* *sono* *estinti* ITALIAN
the.M.PL dinosaur.M.PL be.3PL extinct.M.PL
'Dinosaurs are extinct'

(as opposed to:
quel *pittore* *ha* *dipinto (dei)* *dinosauri*
that.M.SG painter.M.SG have.3SG paintedof.the.M.PL dinosaur.M.PL
'That painter painted (s'm) dinosaurs')

l' *acqua* *fa* *bene* ITALIAN
the.F.SG water.F.SG do.3SG well
'Water is healthy'
(as opposed to:

bere *(un'/dell')* *acqua* *povera* *di sodio* *ti*
drink a.F/of.the.F.SG water.F.SG poor.F.SG of sodium 2SG.DAT.CL

farebbe *bene*
do.3SG well
'It would be healthy for you to drink a water with little sodium')

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DGP, ± grammaticalized text anaphora

Distinguishes languages that systematically encode a noun's previous mention in the discourse (e.g., Imbabura Quichua, Archi) from languages that do not (e.g., Latin, Russian, Hindi, Mandarin, Japanese)

Manifestations

Is any of the following true in the language?

a) The language has a marker found with nominal arguments denoting an entity that has been mentioned in the previous context ('anaphoric reading'), which is not found when definiteness is determined from the pragmatic context

ex: *(shuj) alku-ta-mi riku-rka-ni. Chay / Kay alku-ka wakaju-rka-mi*
one dog-ACC-FOC see-PST-1SG DEM / DEM dog-NOM bark-PST-FOC
'I saw a dog. The dog was barking.' IMBABURA QUICHUA

As opposed to:

(shuj) autubus-ta-mi japi-rka-ni. Kundujturr-ka machosh-ka-mi ka-rka
one bus-ACC-FOC take-PST-1SG driver-NOM drunk-NOM-FOC be-PST
'I took a bus. The driver was drunk'

... *Chay/Kay kundujturr-ka machosh-ka-mi ka-rka*
DEM/DEM driver-NOM drunk-NOM-FOC be-PST
'That/this driver was drunk'
(only possible if the driver is not the driver of the bus I took)

indi-ka achiyajun-mi / lusiru-mi
sun-NOM shine-FOC / be.brilliant-FOC
'the sun is shining'

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CGR, ± long-distance 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) One finds bare singular count nouns with an indefinite reading in subject position

ex: *kelev nashax oti* HEBREW
dog bit ECM.1SG
'a dog bit me'

b) One finds bare nominal arguments with a definite Genitive not occurring at their boundary that have a definite reading

ex: *lausn Péturs á vandamál-inu* ICELANDIC
solution Pétur-GEN of problem-the
'Pétur's solution of the problem' (Sigurðsson 2006: §2.4 ex. 7)

disgrifiad cywir y ddamwain WELSH
description accurate the accident
'the accurate description of the accident' (adapted from Rouveret 1994)

c) One finds bare nominal arguments containing a demonstrative not occurring at their boundary

ex: *more ze shel ha-yeled* HEBREW
teacher this of the-boy
'this teacher of the boy'

d) One finds nominal arguments where a definiteness affix is attached to the noun occurring in a non-boundary position and no other overt definite category appears at the boundary

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

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NWD, ± long distance reference
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) DP is head initial, and one finds bare arguments headed by a proper name following an adjective

ex: *ancient Rome was a powerful city*

b) One finds bare arguments headed by a plural/mass noun receiving a kind-referring interpretation

ex: *dinosaurs are extinct*
Mme Curie discovered radium

c) One finds unmodified bare arguments headed by a plural/mass noun occurring in subject position with generic interpretation

ex: *dogs are dangerous*
water is the best thing to drink to stay hydrated

d) One finds definite specific bare nominal arguments containing a prenominal Genitive non-agreeing in phi-features with the head noun

ex: *John's bike (≠ a bike of John's)*

e) DP is head initial, and the language has definiteness affixes that occur on non-initial constituents of bare nominal arguments

ex: *stóra bók-in* ICELANDIC
large book-the
'the large book'

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f) One finds possessives occurring without a determiner in argument phrases with no nominal head

ex: *mine is better*

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FVP, ± 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) One finds nominal subjects not overtly marked as 1st/2nd person that control 1st/2nd person verb agreement

ex:	*las/algunas*	*mujeres*	*estamos*	*cansadas*	SPANISH
	the.F.PL/some.F.PL	women.F.PL	be.1PL	tired.F.PL	
	'we women/some of us women are tired'				

b) One finds nominals in topic position that are not overtly marked as 1st/2nd person but are resumed by a 1st/2nd person pronoun

ex:	*a*	*los*	*hombres*	*siempre*	*nos*	*gusta*	*exagerar*
	to	the.M.PL	man.M.PL	always	to-1PL	please.3SG	exaggerate
	'we men always like to exaggerate'						

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DGD, ± 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?

a) The language has different articles marking a distinction between proximate vs. non-proximate (in time or space), which are different from determiners encoding deictic/discourse-anaphoric features (e.g. demonstratives)

ex: *Gótik yi yàq nañu Rome b.u jëkk*
Goths CLASS.PL.DEF destroy 3PL.PRF Rome CLASS.SG.LK ancient
ba WOLOF
CLASS.SG.DEF.DIST
'the Goths destroyed ancient Rome'

Rom-u tey bi
Rome-of today CLASS.SG.DEF
'contemporary Rome'

gizon-ak W. BASQUE
man-ART.PL
'the men'

gizon-ok
man-ART.PL.PROX
'we men', 'you men', 'the men here' (Trask 2003: 122)

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DPQ, ± free null partitive 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?

a) One finds Case/adposition alternations with singular count, plural and mass bare nominal arguments such that one of these Cases/adpositions assigns a partitive indefinite meaning

ex: *lu-i-n* *kirja-n* FINNISH
read-PST-1SG book-GEN/ACC
'I read the/a book'

lu-i-n *kirja-a*
read-PST-1SG book-PART
'I read a little (=a non-specified amount) of the/a book'

lu-i-n *kirja-t*
read-PST-1SG book-PL.NOM/ACC
'I read the books'

lu-i-n *kirjo-j-a*
read-PST-1SG book-PL-PART
'I read (a non-specified amount of) books'

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DCN, ± article-checking N

Distinguishes languages that have a definite article suffixed to the head noun or to the first adjective of the nominal phrase (e.g., Romanian, Bulgarian, Scandinavian) from languages in which the article occurs 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) The language has a non-phrase-final morpheme that is suffixed to a head noun and functions as the only marker of the definite reading of the nominal phrase

ex:	*pro-chetox*	*kniga-ta*	*za*	*Napoleon*	BULGARIAN
	read-1SG.PST.PERF	book-the	about	Napoleon	
	'I read the book on Napoleon'				

b) The language has a non-phrase-final morpheme that is suffixed to an attributive adjective and functions as the only marker of the definite reading of the nominal phrase

ex:	*pro-chetox*	*nova-ta*	*kniga*	BULGARIAN
	read-1SG.PST.PERF	new-the	book	
	'I read the new book'			
	pro-chetox	*(edna) nova*	*kniga*	
	read-1SG.PST.PERF	(one/a) new	book	
	'I read a new book'			

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DNN, ± 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 nominal arguments that contain no overt noun (nor adjective) but contain one of its arguments realized as a non-pronominal Genitive

ex:	*el*	*de*	*Juan*	SPANISH
	the.M.SG	of	Juan	
	'Juan's one'			

b) Articles appear in nominal arguments that contain no overt noun (nor adjective) but contain an adpositional argument/adjunct

ex:	*la*	*exposición*	*"Somos Monegros*	*se*	*inaugura*		
	the.F.SG	exhibition.F.SG	somos Monegros	IMPERS	open.3SG		
	este	*viernes*	*dentro de*	*las*	*por*	*el*	*XX*
	DEM.M.SG	Friday	inside of	the.F.PL	for	the.M.SG	20th
	aniversario	*de*	*la*	*Comarca*			SPANISH
	anniversary.M.SG	of	the.F.SG	Comarca			

'the exhibit "Somos Monegros" opens this Friday within those for the 20th anniversary of the Comarca'

c) Articles appear in nominals that contain no overt noun but contain a relative clause

ex:	*el*	*que*	*salió*	SPANISH
	the.M.SG	that	go-out.3SG.PST	
	'the one that went out'			
	el	*que*	*conocí*	
	the.M.SG	that	meet.1SG.PST	
	'the one I met'			

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DIN, ± D-controlled inflection on N

Distinguishes languages that have a special inflection on the noun (and possibly also on adjectives) depending on the presence/absence/choice/interpretation of the determiner (e.g., nunation in Arabic) from languages in which head nouns have the same form with all determiners (e.g., Hebrew)

Manifestations

Is any of the following true in the language?

a) One finds morphological alternations on the noun (and possibly also on adjectives) depending on the presence/absence of a definite determiner

ex:	*qara'tu*	*kitaab-a-n*	*jamiil-a-n*	ARABIC
	PFV.read.1SG	book.M.SG-ACC-INDEF	beautiful-ACC-INDEF	
	‘I read a beautiful book’			
	qara'tu	*l-kitaab-a*	*l-jamiil-a*	
	PFV.read.1SG	the-book.M.SG-ACC	the-beautiful-ACC	
	'I read the beautiful book'			

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FGC, ± 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?

a) The language has lexically selected classifiers encountered when numerals are combined with nouns denoting naturally atomic entities

ex: *san ge ren* MANDARIN
three CLF person
'three persons'

san zhi bi
three CLF pen
'three pens'

san ben shu
three CLF book
'three books' (Cheng and Sybesma 1999: 514)

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FGE, ± grammaticalized bounding classifier

Distinguishes between two types of classifier languages, both types allowing sequences Classifier-Noun without a numeral ('bare classifiers'). In one 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. In the other 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

Manifestations

Is any of the following true in the language?

a) One finds postverbal nominals with a 'bare classifier' receiving a definite interpretation

ex:	*Wufei*	*jam-jyun*	**(wun)*	*tong*	*la*	CANTONESE
	Wufei	drink-finish	CLF	soup	SFP	
	'Wufei finished drinking the soup'					(Cheng and Siebesma 1999: 150)

keoi	*maai-zo*	*gaa*	*ge*
he	sell-zo	CLF	car
'He sold the car'			(Cheng and Siebesma 1999: 524)

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FCN, ± 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?

a) One finds morphological alternations on predicate nouns that are controlled by the Person feature of their subject

ex: *nuwwu* *manci-wāḍiwi* TELUGU
2SG good.person-2SG
'you are a good person'

āme *manci-di*
3SG.F good.person-3SG
'she is a good person'

wāḷḷu *manci-wāḷḷu*
3PL good.person-3PL
'they are good persons'

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HMP, ± NP-heading modifier

Distinguishes languages in which adjectival modification is systematically expressed with the property realized as a nominal(ized) head and the entity denoted by the nominal appearing as a modifier of the latter (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?

a) One finds nominals headed by a nominalized property such as shape, color or provenance and modified by an argument, and the whole nominal denotes the referent of the argument, while the nominalized property is interpreted as an attribute of the argument.

ex:	w*ëri*	*kawë-no*	*neejan*	TIRIYÓ
	woman	tall-NOMINALIZER	coming	

'the tall woman is coming' (adapted from Meira 1999: 525)

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ARR, ± free reduced relatives

Distinguishes languages in which all adjectives can be used as reduced relative clauses, having the distribution of the latter (e.g., Wolof, Turkish, 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) The language allows for 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	CLASS-LK	blue	CLASS-LK	new	CLASS-LK	German	

'a new blue German car'

Possible variants:
oto bu bees bu bulo bu Alman
oto bu Alman bu bulo bu bees
oto bu Alman bu bees bu bulo

b) In indefinite nominal phrases, one finds adjectives to the left of a cardinal numeral that can also be found to its right

ex.	*güzel*	*gri*	*bir*	*kedi*	TURKISH
	beautiful	grey	a	cat	

'a beautiful grey cat'

güzel	*bir*	*gri*	*kedi*
beautiful	a	grey	cat

'a beautiful grey cat' (Bayirli, 2018: 3)

c) One finds adjectives to the right of a post-nominal argument of N that can also be found to its left

ex.	*la*	*sorella*	*di*	*Gianni bionda*	ITALIAN
	the.F.SG	sister.F.SG	of	Gianni blonde.F.SG	

'Gianni's blonde sister'

la	*sorella*	*bionda*	*di*	*Gianni*
the.F.SG	sister.F.SG	blonde.F.SG	of	Gianni

'Gianni's blonde sister'

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d) One finds argument adjectives in prenominal position, and one also finds postnominal adjectives (of any category)

ex: GREEK

ενα	*γερμανικό*	*αυτοκίνητο*		
éna	*yermanikó*	*aftokínito*		
a	German	car		
‘a German car’				

ενα	*αυτοκίνητο*	*γερμανικό*	/	*πράσινο*
éna	*aftokínito*	*yermanikó*		*prásino*
a	car	German		green
‘a German/green car’				

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GCN, ± head-marking with Genitive

Distinguishes languages in which nouns have a different morpho-phonological form, depending on whether they occur with a genitive argument or not (e.g., Hungarian, Finnish, Turkish, Yukaghir, Arabic, Hebrew, Wolof) from languages in which nouns do not exhibit this kind of alternation (e.g., IE, Japanese, Basque)

Manifestations

Is any of the following true in the language?

a) One finds some systematic morpho-phonological alternations on head nouns depending on the presence/absence of a non-adpositional genitive argument

ex: *ha bayit* HEBREW
the house
'the house'

beyt ha more
house the teacher
'the teacher's house'

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GFN, ± 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)

Manifestations

Is any of the following true in the language?

a) One finds morphological alternations on nouns modified by a genitive argument that are controlled by the Person feature of the genitive argument

ex: *Vanja-len* *kńiga-jez* UDMURT
Vanya-GEN book-3SG
'Vanya's book'

(min-am) *kńiga-je*
1SG-GEN book-1SG
'my book'

kńiga
'a/the book'

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GFP, ± 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?

a) One finds morphological alternations on nouns modified by a genitive argument depending on whether the genitive argument carries 1st or 2nd person features

ex:	(*minu-n*)	*veljie-ni*	*voitt-i*	*auto-n*	FINNISH
	1SG-GEN	brother-1.SG.POSS	win-PST.3SG	car-GEN	
	‘my wife won a car’				
	(*sinu-n*)	*veljie-si*	*voitt-i*	*auto-n*	
	2SG-GEN	brother-2.SG.POSS	win-PST.3SG	car-GEN	
	‘your brother won a car’				

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GP3, ± agreement with all 3rd person DPs

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

Manifestations

Is any of the following true in the language?

a) One finds morphological alternations on the noun that are controlled by the Person of its genitive/possessive argument

ex: *Vanja-len* *kńiga-jez* UDMURT
Vanya-GEN book-3SG
'Vanya's book'

(min-am) *kńiga-je*
1SG-GEN book-1SG
'my book'

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GEI, ± 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 possessives) 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?

a) One finds pre- or post-nominal genitive/possessive arguments of the noun, and the noun agrees in Person with them

ex: *en* *oloppoh-uŋ* YAKUT
2SG chair-2SG
'your chair'

oloppoh-uŋ *en*
chair-2SG 2SG
'your chair'

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CSE, ± full c-selection
Distinguishes languages in which a head noun can take adpositional complements (e.g., IE, Semitic) from languages in which the noun's adpositional complements cannot be directly selected by it, and occur embedded in modifiers or extraposed (e.g., Ugric)

Manifestations

Is any of the following true in the language?

a) One finds nouns constructed with two arguments (realized as possessive, non-pronominal Genitive or PP/oblique, whether or not independently licensed by a linker), neither of them in an extraposed position

ex: *John's conversation about Napoleon*
John's appointment with Mary at the library

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EAL, ± 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?

a) One finds nouns with an internal argument that bears 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:	*Rasul-li*	*tilivizor*	*b-uš-mul*	ARCHI
	Rasul.I-SG.ERG	TV.III.SG.ABS	III.SG-buy-MASDAR	

'Rasul's buying of a TV set' (Polinsky, Radkevich and Chumakina 2017: 60)

MASDAR indicates a nominalizer

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CAL, ± 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?

a) One finds nouns with an internal and an external argument, where the internal argument bears 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-destruction of 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
'the army destroyed the city' (Siloni 1997: 27)

ha-'ir *nehersa* *'al-yedey* *ha-cava*
the-city was.destroyed by the-army
'the city was destroyed by the army' (Siloni 1997: 89)

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LKA, ± argument linker

Distinguishes languages that must use a marker dedicated to adnominal modification, 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 marker exists (e.g., Germanic, Romance, Slavic, Semitic)

Manifestations

Is any of the following true in the language?

a) The language has a morpheme that introduces arguments of head nouns, that is the same as the one used to introduce other modifiers and is distinct from Case marking, articles, and from adpositions introducing arguments of the verb

ex:	*oto*	*(b-)u*	*Maryam*	WOLOF
	car	CLASS-LK	Maryam	
	'Maryam's car'			
	oto	*b-u*	*bees*	
	car	CLASS-LK	new	
	'a new car'			

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LKO, ± oblique linker

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

Manifestations

Is any of the following true in the language?

a) The language has 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-LK	eight	year-LOC-LK	flavor	good-LK	wine-ART

'wine of good flavor (gathered) in eight years in Alava'

mendi-eta-ko	*handi*	*haiek*	
mountain-LOC-LK	big	those	

'those big ones in the mountains' (Trask 1997: 91) BASQUE

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LKP, ± predicative linker

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

Manifestations

Is any of the following true in the language?

a) The language has is a morpheme that introduces adnominal adjectives and is different from articles

ex: *bëgg naa jàng a-b téére b-u rafet*
want 1SG.PRF read INDEF-CLASS book CLASS-LK beautiful
'I want to read a beautiful book' WOLOF

bëgg naa jàng téére b-u rafet b-i
want 1SG.PRF read book CLASS-LK beautiful CLASS-DEF.PROX
'I want to read the beautiful book (here)'

bëgg naa jàng téére b-i
want 1SG.PRF read book CLASS-DEF.PROX
'I want to read the book (here)'

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

ex: *téére b-u jàng naa b-i* WOLOF
book CLASS-LK read 1SG.PRF CLASS-DEF.PROX
'the book that I read'

a-b téére b-u jàng naa
INDEF-CLASS book CLASS-LK read 1SG.PRF
'a book that I read'

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DMP, ± 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?

a) One finds nouns or adjectives bearing a definiteness suffix that are immediately followed by a possessive

ex: *kniga-ta* *moja* BULGARIAN
book-the 1SG.POSS
'my book'

nova-ta *moja* *kniga*
book-the 1SG.POSS book
'my new book'

bok-en *min* NORWEGIAN
book-the 1SG.POSS
'my book'

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DMG, ± 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) One finds nouns or adjectives bearing a definiteness suffix that are immediately followed by a full genitive phrase whose determiner position hosts a Genitive-marked element (i.e. either an overt determiner or a proper name in determiner position)

ex: *portret-ul* *student-ului* ROMANIAN
portrait-the.M.SG student-the.GEN
'the student's portrait'

portret-ul *Monnalisei*
portrait-the.M.SG Monalisa.GEN
'the portrait of Mona Lisa'

b) The language has a morpheme with the same phi-feature morphology as a definite article (though not necessarily semantically definite) that introduces genitive phrases that have a filled determiner position (i.e. either a nominal with an overt determiner or a proper name in determiner position)

ex: un *portret* *a-l* *Monnalisei* *a-l* *lui-Leonardo*
a portrait A-M.SG Monalisa.GEN A-M.SG 3SG.GEN-Leonardo
'a portrait of Mona Lisa by Leonardo' ROMANIAN

un *portret* *a-l* *student-ului*
a portrait A-M.SG student-the.GEN
'a portrait of the student'

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GUN, ± 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) One finds nominal arguments where a non-adpositional prenominal Genitive is in turn preceded by an adjective, and this Genitive has the same type of morphological realization as postnominal Genitives

ex: *ingens* *scolasticorum* *turba* *in*
large.SG.NOM scholar.M.PL.GEN crowd.F.SG.NOM in
porticum *venit* LATIN
colonnade.M/N.SG.ACC come.3SG
'a large crowd of students comes under the colonnade' (Petronius, *Satyricon*, 6)

alio *genere* *Furiarum* (Petronius, *Satyricon*, 1)
other.SG.ABL kind.SG.ABL Fury.F.PL.GEN
'another kind of Furies'

repentinam *eius* *defensionem* *Gabini* (Cic. Fam., 1,9)
sudden.F.SG.ACC 3SG.GEN defence.F.SG.ACC Gabinius.GEN
'his sudden defence of Gabinius' (Cicero, *Fam.* 1.9, adapted from Gianollo 2005: 72)

b) One finds nominal arguments where two non-adpositonal Genitives appear on one side of the noun, and these Genitives have the same type of morphological realization as Genitives found on the other side of the noun

ex: *τὴν* *τοῦ* *Λάχητος* *τῶν* *νεῶν*
the.F.SG.ACC the.M.SG.GEN Laches.M.SG.GEN the.PL.GEN ship.PL.GEN

ἀρχὴν CLASSICAL GREEK
command.F.SG.ACC
'Laches' command of the ships' (Thuc, 3.115.6, adapted from Guardiano 2011: 130)

τὸν *τρόπον* *τοῦ* *ἐπαίνου*
the.M.SG.ACC way.M.SG.ACC the.M.SG.GEN praising.M.SG.GEN
'the way of praising' (Plato 199 a 4, adapted from Guardiano 2011: 129)

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c) One finds nominal arguments where two non-adpositional Genitives follow a postnominal adjective

ex: *ἡ* *δὲ* *διαγνώμη* *αὕτη* CLASSICAL GREEK
the.F.SG.NOM PRT decree.F.SG.NOM DEM.F.SG.NOM

τῆς *ἐκκλησίας* *τοῦ* *τὰς*
the.F.SG.GEN assembly.F.SG.GEN the.M/N.SG.GEN the.F.PL.ACC

σπονδὰς *λελύσθαι*
treaty.F.PL.ACC being-dissolved
'this decree of the assembly that the peace treaty be broken'
(Thuc. 1.87.6, adapted from Guardiano 2011: 130)

d) One finds nominal arguments where two non-adpositional Genitives precede a prenominal adjective (or adjectives).
NOTE: in some phrases the same Genitive may also occur once more between the adjective(s) and the noun.

ex: *Leonardo-n* *Louvre-n* *maailmankuuluisa* *(Mona Lisa-n)*
Leonardo-GEN Louvre-GEN famous (Monna Lisa-GEN)

muotokuva
portrait

'Leonardo's famous portrait (of Monna Lisa) at the Louvre' FINNISH

e) One finds nominal arguments containing three non-adpositional Genitives

ex: *eorum* *dierum* *consuetudine* *itineris*
that.M.PL.GEN day.M.PL.GEN habit.F.SG.ABL journey.SG.GEN

nostri *exercitus* *perspecta* LATIN
1PL.POSS.SG.GEN army.SG.GEN well-observed.F.SG.ABL

'having accurately observed our army's method of marching of those days'
(Caes. *Gal*. 2.16, adapted from Gianollo 2005: 76)

Brutuksen *Julius Caesarin* *vuoden* *44EKr* *(häikäilemätön)*
Brutus.GEN Julius Caesar.GEN year.GEN 44BC pitiless

murha
assassination

'Brutus' pitiless assassination of J. Caesar in 44 BC' FINNISH

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GAD, ± free Genitive

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 non-adpositional and occurs in fixed, non iterable positions (e.g., Standard Greek, Russian, Polish, Turkish)

Manifestations

Is any of the following true in the language?

a) The language has adpositional genitive arguments of the noun

ex: *the murder of John Lennon*

le	*livre*	*de*	*notre*	*ami*	FRENCH
the	book	of	our	friend	
‘our friend’s book’					

artista	*hor-ren*	*pailazo*	*bat-en*	*erretratu-a*	BASQUE
artist	that-GEN	clown	one-GEN	portrait-ART	
‘that artist’s portrait of a clown’					

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GFL, ± 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) One finds nominal arguments where an adjective precedes a non-adpositional Genitive functioning as an argument or alienable possessor of the noun, 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: *portread* *hardd* *y* *plentyn* WELSH
portrait beautiful the child
'the child's beautiful portrait'

(šis) *juodas* *Reginos* *automobilis* LITHUANIAN
(DEM.NOM) black.NOM Regina.GEN car.NOM
'(this) black car of Regina's' (from Rutkowski 2008, 222-223)

το *θαυμαστό* *πορτρέτο* *της* *κοπέλας* GREEK
to *thavmastó* *portréto* *tis* *kopélas*
the.N.SG beautiful.N.SG portrait.N.SG the.F.SG.GEN girl.F.SG.GEN
'the girl's beautiful portrait'

b) One finds nominal arguments where a non-adpositional Genitive functioning as an argument or alienable possessor of the noun follows the noun
(*nominals with 'home' as head noun are irrelevant*)

ex. *το* *φόρεμα* *της* *κοπέλας* GREEK
to *fórema* *tis* *kopélas*
the.N.SG dress.N.SG the.F.SG.GEN girl.F.SG.GEN
'the girl's dress'

harisat *ha-migdal* HEBREW
destruction the-tower
'the destruction of the tower'

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PGL, ± 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?

a) One finds nominal arguments where an adjective precedes a non-adpositional Genitive, whether or not the noun intervenes, and the relation between the head noun and the Genitive is any of: kinship/part-whole/container-containee/inalienable possession

ex:	*a*	*buttigghja*	*grossa/miricana/lorda*	VERBICARO
	the.F.SG	bottle.F.SG	big.F.SG/American.F.SG/dirty.F.SG	
	u	*vinu*	*(jancu)*	
	the.M.SG	wine.M.SG	(white.M.SG)	

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

b) One finds nominal arguments where a non-adpositional Genitive follows the noun, and the relation between the head noun and the Genitive is any of: kinship/part-whole/container-containee/inalienable possession

ex:	*a*	*buttigghja*	*u*	*vinu*	*(jancu)*	VERBICARO
	the.F.SG	bottle.F.SG	the.M.SG	wine.M.SG	(white.M.SG)	

'the bottle of (white) wine' (adapted from Silvestri 2013: 142)

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GGH, ± generalized GenH

Distinguishes languages in which all full nominal phrases can occur as non-iterable Genitives in pre-adjectival position, i.e. in GenH (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?

a) One finds nominal arguments where a Genitive realized as a visibly branching phrase headed by a common noun precedes a prenominal adjective

ex. *the new king's first visit to Wales*
the new King's slimmed down monarchy
the new King of England's sources of income

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GSI, ± 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?

a) The language has a morpheme that is attached to inalienably possessed nouns and agrees 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' (Sandalo 1996)

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ALP, ± 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?

a) The language has a morpheme that is attached to possessed nouns to indicate that the object denoted by the noun is alienable from the possessor

ex: *dil-iβ* EVENKI
head-1SG
'my head'

dil-i-ŋi-β
head-EV-ALIEN.POSS-1SG
'the head (of an animal) that belongs to me'

Maša bödel-en EVEN B
Maša leg-3SG
'Masha's leg'

Maša bödel-eŋ-en
Maša leg-ALIEN.POSS-3SG
'a leg that belongs to Masha (not part of Masha)'

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GIT, ± 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 placeholder 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?

a) One finds nominal arguments containing two non-adpositional Genitives, where the element that licenses the first one (the head noun or a nominal proform) is repeated to license the second one

ex:	*portret-ul*	*Sfintei*	*Ecaterina*	*a-l*
	portrait-the.M.SG	Saint.F.SG.GEN	Catherine.F.SG	A-M.SG
	Artemisiei			
	Artemisia.F.SG.GEN			
	'Artemisia's portrait of St. Catherine'			ROMANIAN

un	*portret*	*a-l*	*Sfintei*	*Ecaterina*
a.M	portrait	A-M.SG	Saint.F.SG.GEN	Catherine.F.SG
a-l	*Artemisiei*			
A-M.SG	Artemisia.F.SG.GEN			
'A portrait of St. Catherine by Artemisia'				

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UST, ± 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?

a) The language allows for freely ordered (truth-functionally synonymous/interchangeable) sequences of adjectives between an indefinite numeral and the head noun

ex:	*bir*	*chiroyli*	*kulrang*	*katta*	*mushuk*	UZBEK
	a	beautiful	grey	big	cat	

'a beautiful big grey cat'

Possible variants:
bir katta chiroyli kulrang mushuk
bir katta kulrang chiroyli mushuk
bir kulrang katta chiroyli mushuk
bir kulrang chiroyli katta mushuk

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GPC, ± 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 in which no counter-agreement is observed (e.g., IE)

Manifestations

Is any of the following true in the language?

a) As a general rule, cardinal expressions that inflect for Gender take a value that is the opposite of the noun's

ex. *thalaath-at-u rijaal-in jaaʔuu* ARABIC
three-F-NOM man.PL-GEN come.PST.3PL
'three men came.'

haa'ulaa'i r-rijaal-u l-'arba'-at-u
DEM.PL the-man.PL-NOM the-four-F-NOM
'these four men'

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PSC, ± 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)

Manifestations

Is any of the following true in the language?

a) One finds nominal arguments where a non-compound cardinal numeral higher than 'two' functions as an indefinite quantifier and the noun bears plural marking

ex: *three boys, four boys*
one boy

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PSC, ± plural spread through cardinal adjectives

Distinguishes languages that use plural nouns after cardinal numerical adjectives (i.e. cardinals cooccurring with a demonstrative or other definite determiner, even a null one) (e.g., Farsi) from languages that use singular ones also in this case (e.g., Uralic, Turkic)

Manifestations

Is any of the following true in the language?

a) One finds nominal arguments where a definite determiner cooccurs with a non-compound cardinal numeral higher than 'two', and the noun bears overt plural marking

ex: *se* *ta* *mænzel* FARSI
three CLF house
'three houses'

un *se* *ta* *mænzel-ha*
DEM three CLF house-PL
'those three houses'

b) One finds alternations in the interpretation of nominal arguments modified by a non-compound cardinal numeral higher than 'two' depending on the number marking on the noun: overt plural marking results in definite interpretation, while absence of plural morphology results in indefinite interpretation

ex: *se* *ta* *danešju* FARSI
three CLF student
'three students' (cannot mean: 'the three students')

se *ta* *danešju-ha*
three CLF student-PL
'the three students' (cannot mean: 'three students')

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PMN, ± Person 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?

a) The language has a morpheme that, when attached to cardinal numerals, forms "personal" numerals ('we three')

ex:	(*aś-me-os*)	*vit'-na- mi̯*	*ik*	*lingvist-jos*	UDMURT
	REFL-1PL-NOM	five-DRV-1PL	PRT	linguist-PL	
	'(speaking of ourselves,) we five are linguists.'				
	(*aś-te-os*)	*vit'-na-di̯*			
	REFL-2PL-NOM	five-DRV-2PL			
	'(speaking of you,) you five …'				
	(*aś-se-os*)	*vit'-na-zi̯*			
	REFL-3PL-NOM	five-DRV-3PL			
	'(speaking of them,) the five of them …'				

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RHM, ± Person marking on the head of relative clauses
Distinguishes languages in which nouns modified by a relative clause contain a possessor-marking 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?

a) The language has a person agreement affix that is attached to the head noun modified by a relative clause and is controlled by an argument within the relative clause

ex: *a* *festelt* *polc-om* HUNGARIAN
the paint.PRF.PRTCP shelf-1SG
'the shelf that I painted'

a *polc*
the shelf
'the shelf'

bu *Künnej* *kömölöh-ör* *kyyh-a* YAKUT
DEM Künnej help-AOR girl-3SG
'this girl whom Künnej helps'

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FRC, ± finite relative clauses

Distinguishes languages that have relatives as full finite clauses and normal clausal Case-assignment (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?

a) One finds relative clauses whose predicate bears morphology specific to finite verb forms and the subject has the same Case as in simple clauses

ex: *the magazine that John bought/buys*
(compare to *John bought/buys the magazine*)

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NRC, ± participial relative clauses

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) One finds 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* *ɣ^{wʕ}ay* *b-oxi-n* TSEZ
DEM.I-GEN1-FOC dog.ABS.III III-run-PFV.CVB
b-äk'i-ru-li]-*s* *uži*]
III-go-PST.PRTC-NOMINALIZER-GEN1 boy.ABS.I
'the boy whose dog has run away' (Polinsky 2015: 269)

[*Saša-n* *košt-mo*] *pölem* MEADOW MARI
Sasha-GEN enter-PRTC room
'the room that Sasha walked in'

b) One finds 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*] *kńiga-jez* UDMURT
3SG-GEN read-PRTC book-GEN
'the book that must be read by him/her' (adapted from Winkler 2001: 58)

[*Saša-n* *košt-mo*] *pölem* MEADOW MARI
Sasha-GEN enter-PRTC room
'the room that Sasha walked in'

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DOR, ± definiteness on relatives

Distinguishes languages that spread the definiteness marking of the head of a relative clause to an element introducing the 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?

a) The language has elements introducing relative clauses that agree in definiteness with the head of the relative

ex: *laqii-tu* *l-mudarris-a* *sh-shaabb-a* *l-ladhii* ARABIC
met-1SG the-teacher-ACC the-young-ACC the-REL
wasaf-ta-hu *l-ii* *ʔamsi*
described-2SG-3SG.M to-me yesterday
'I met the young teacher that you described to me yesterday'

laqii-tu *mudarris-a-n* *shaabb-a-n* *wasafa-hu*
met-1SG teacher-ACC-INDEF young-ACC-INDEF described-3SG.M
l-ii *Djuun* *ʔamsi*
to-me John yesterday
'I met a young teacher that John described to me yesterday'

xaj [*b-i* *ma* *jënd*] *b-i* WOLOF
dog CLASS-DEF 1SG bought CLASS-DEF
'The dog that I bought'

u-b *xaj* [*b-u* *ma* *jënd*]
INDEF-CLASS dog CLASS-INDEF 1SG bought
'A dog that I bought' (Torrence 2013: 158-159)

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FFP, ± 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?

a) One finds morphological alternations on particles introducing arguments of a head noun (genitive adpositions or linkers) that are controlled by phi-fetures (at least Number) of the noun

ex.	*xaal*	*w-u*	*réy*	*w-i*	WOLOF
	melon	CLASS-LK	big	CLASS-DEF	
	'the big melon'				
	xaal	*yi-u*	*réy*	*y-i*	
	melon	CLASS-LK	big	CLASS-DEF	
	'the big melons'				

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NUP, ± 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?

a) As a general rule, non-genitive arguments precede their head N

ex: *oine-z-ko* *bidaia* *bat* BASQUE
foot-by-KO journey one
'a journey on foot'

Tokio-ra-ko *bidaia* *bat*
Tokyo-to-KO journey one
'a journey to Tokyo'

Tokyo se *do* *achchhi* *yaatraen* HINDI
Tokyo from two nice trips
'two nice journeys from Tokyo'

Napoleon *s'arys'* *kńiga* UDMURT
Napoleon about book
'a book about Napoleon'

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PNP, ± complement under 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) As a general rule, an adposition precedes its complement

ex. *of John, with John, from John*

b) As a general rule, adpositional genitive arguments follow their head noun

ex. *a picture of John*

c) As a general rule, in linker phrases, a linker precedes its complement

ex.	*bëgg*	*naa*	*jàng*	*a-b*	*tééré*	*b-u*	*refet*
	want	1SG.PRF	read	INDEF-CLASS	book	CLASS-LK	beautiful
	'I want to read a beautiful book.'						WOLOF

d) As a general rule, linker phrases follow their head noun

ex.	*bëgg*	*naa*	*jàng*	*a-b*	*tééré*	*b-u*	*refet*
	want	1SG.PRF	read	INDEF-CLASS	book	CLASS-LK	beautiful
	'I want to read a beautiful book.'						WOLOF

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NUD, ± NP under D

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

Manifestations

Is any of the following true in the language?

a) In nominal arguments, the article occurs as the first word (except for 'all' and demonstratives) or affixed to the first word, and is followed by some other overt element belonging to the nominal phrase

ex. *il* *lupo* *grande di* *Gianni* ITALIAN
the.M.SG wolf.M.SG big.SG of Gianni
'Gianni's big wolf'

Lup-ul *mare* *a-l* *lui* *Ion* ROMANIAN
wolf-the big A-M.SG 3SG.M.GEN Ion
'Ion's big wolf'

b) In nominal arguments, one finds positional alternations affecting cardinal or numerical adjectives ('one','two',...., 'many', 'few'…): they occur after a Genitive/possessive if the nominal phrase has a definite reading, and as the first word if it has an indefinite reading

ex: *moje* *trzy* *książki* POLISH
1SG.POSS three books
'my three books' (informationally unmarked)

trzy *moje* *książki*
three 1SG.POSS books
'three books of mine' (informationally unmarked) (Rutkowski 2007)

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NUC, ± N under cardinals

Distinguishes languages in which the head noun normally surfaces after cardinal adjectives (e.g., IE, Uralic, Altaic) from languages in which the noun surfaces before some or all cardinal adjectives (e.g., Semitic, Malagasy).
NOTE: if the cardinal is a numeral noun heading the construction, as in 'a dozen of N', it does not count as a cardinal adjective.

Manifestations

Is any of the following true in the language?

a) In definite nominal arguments, one finds cardinal adjectives preceding the noun

ex: *I saw those three new American cars*

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NM1, ± 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 precede the head noun (e.g., Italian, French, Spanish, Walloon, Germanic, Slavic, Standard Greek) from languages in which they cannot (e.g., Farsi, some Romance dialects of Italy, Italiot Greek)

Manifestations

Is any of the following true in the language?

a) In discourse neutral contexts (and without lexical restrictions), one finds *quality*/*size* adjectives that, as a general rule, precede the noun

ex:	*une*	*petite*	*table*	*de*	*bois*	*française*	FRENCH
	a	small	table	of	wood	French	
	'a small wooden French table'						

b) In discourse neutral contexts, in nominal arguments with a visible definite article, one finds possessives that precede the noun and follow a cardinal numeral

ex:	*Gianni ha*	*incontrato*	*i*	*tre*	*suoi*	ITALIAN
	Gianni have.3SG	met	the.M.PL	three	3SG.POSS.M.PL	
	amici	*americani*				
	friend.M.PL	American.M.PL				
	'Gianni met his three American friends'					

c) In discourse neutral contexts, one finds two or more adjectives preceding the noun

ex:	*una*	*cara*	*vecchia*	*amica*	ITALIAN
	a.F	dear.F.SG	old.F.SG	friend.F.SG	
	'a dear old friend'				

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EAF, ± fronted high As

Distinguishes languages in which the head noun surfaces to the left of nearly all adjectives, but a minority of adjectives occur before the noun (e.g., Celtic, some Romance dialects of Italy) from languages in which there are no such exceptions (e.g., some other Romance dialects)

Manifestations

Is any of the following true in the language?

a) One finds lexically selected adjectives (e.g., with the meaning *former, present/current, fake, alleged, supposed, amusing/funny, little, additional, strange, old, new*) exceptionally preceding the noun (while the same adjectives normally follow it)

ex:	*canuscimmu*	*(a)*	*lu*	*novu*	*sindacu*	R. CALABRIA
	meet.1PL.PST	DOM	the.M.SG	new.M.SG	mayor.M.SG	
	'we met the new mayor'					

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NM2, ± N under M2 As

Distinguishes languages in which, given the crosslinguistic structured sequence of adjectives (see NM1 above), MANNER2 adjectives can precede 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?

a) In discourse neutral contexts, one finds *shape/color* adjectives preceding the noun

ex: *a (nice new) blue (French) dress*

one	*(bèle)*	*bleuve*	*cote*	*(alemande)*	WALLOON
a	nice	blue	dress	German	

'a (nice) blue (German) dress'

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NUA, ± 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?

a) In discourse neutral contexts, one finds adjectives of *origin/nationality* preceding the noun

ex: *a (nice new blue) French dress*

ένα	*(ωραίο*	*καινούργιο*	*μπλε)*	*γαλλικό*	*φόρεμα*	GREEK
éna	*oréo*	*kenúrio*	*ble*	*gallikó*	*fórema*	
a.N	nice.N.SG	new.N.SG	blue	French.N.SG	dress.N.SG	

'a (nice new blue) French dress'

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NGL, ± 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., Lithuanian, Latin, Classical Greek, Finnish) 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?

a) In discourse neutral contexts, one finds non-adpositional Genitives occurring between a *structured* adjective and a noun

ex: *(šis) juodas Reginos automobilis* LITHUANIAN
(DEM.NOM) black.NOM Regina.GEN car.NOM
'(this) black car of Regina's' (Rutkowski 2008, 222-3)

ingens scolasticorum turba LATIN
large.SG.NOM scholar.M.PL.GEN crowd.F.SG.NOM
in porticum venit (Petronius, *Satyricon*, 6)
in colonnade.M/N.SG.ACC come.3SG
'a large crowd of students comes under the colonnade'

jatkuva papereitten tarkastus FINNISH
constant.SG.NOM documents.PL.GEN examination.SG.NOM
'a/the constant examination of the documents'

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ACM, ± 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) In discourse neutral contexts, one finds 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	city.GEN	
	'The Polish National Bank of this city'					

b) One finds interpretive alternations affecting adjectives that denote an established natural kind if postnominal and are regular quantifying adjectives if prenominal

ex: *niedźwiedź* *biały* [classifying] POLISH
bear white
'a polar bear' = an animal which belongs to the species *Ursus maritimus*

biały *niedźwiedź* [qualifying]
white bear
'a white bear' = a bear that happens to be white (Rutkowski and Progovac 2005, 102)

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DSN, ± definiteness spread to N

Distinguishes languages where definite articles affixed to 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)

Manifestations

Is any of the following true in the language?

a) One finds a definiteness suffix on the noun even when a non-suffixal article also occurs

ex: *jeg møtte lærer-en* NORWEGIAN
1SG met teacher-the
'I met the teacher'

jeg møtte den unge lærer-en
1SG met the young teacher-the
'I met the young teacher'

b) One finds a definiteness suffix on the noun even when a demonstrative occurs at the boundary

ex. *jeg møtte denn lærer-en* NORWEGIAN
1SG met DEM teacher-the
'I met this young teacher'

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DSA, ± definiteness 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?

a) When the whole nominal argument is understood as definite, one finds definite articles replicated on the adjectives realized as reduced relative clauses

ex:	*διάβασα*	*το*	*βιβλίο*	*το*	*ωραίο*	GREEK
	ðiávasa	*to*	*vivlío*	*to*	*oréo*	
	read.1SG.PST	the.N.SG	book.N.SG	the.N.SG	beautiful.N.SG	

'I read the beautiful book'

As opposed to:

διάβασα	*το*	*ωραίο*	*βιβλίο*
ðiávasa	*to*	*oréo*	*vivlío*
read.1SG.PST	the.N.SG	beautiful.N.SG	book.N.SG

'I read the beautiful book'

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DSS, ± definiteness 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?

a) When the whole nominal argument is understood as definite, one finds definite articles 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*
see.PST-1SG 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

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DOC, ± definiteness on cardinals

Distinguishes languages in which a suffixed 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?

a) One finds a definiteness suffix occurring on a prenominal cardinal numeral

ex:	*tri-te*	*knigi*	BULGARIAN
	three-the	book.PL	
	'the three books'		

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NEX, ± 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?

a) One finds 'bare' proper names in argument function

ex:	*ho*	*incontrato*	*Mario*	ITALIAN
	have.1SG	met	Mario	
	'I met Mario'			
	ho	*visitato*	*Roma*	
	have.1SG	visited	Rome	
	'I visited Rome'			

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PEX, ± 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)

Manifestations

Is any of the following true in the language?

a) One finds 'bare' proper first names referring to individuals in argument function

ex:	*ho*	*incontrato*	*Mario*	ITALIAN
	have.1SG	met	Mario	
	'I met Mario (male)'			
	ho	*incontrato*	*Maria*	
	have.1SG	met	Maria	
	'I met Maria (female)'			

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FEX, ± 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?

a) As a general rule, proper first names referring to female individuals occur 'bare' in argument function

ex:	*ho*	*incontrato*	*Maria*	ITALIAN
	have.1SG	met	Maria	
	'I met Maria (female)'			

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PDC, ± D-checking possessives

Distinguishes languages in which some possessives have the distribution and the bounding and definiteness-assigning functions of definite articles, and therefore cannot cooccur with a visible determiner (e.g., Spanish, French), from languages in which a visible determiner cooccurs with possessives and is actually required in argument function (e.g., Italian)

Manifestations

Is any of the following true in the language?

a) One finds definite nominal arguments containing a possessive occurring in the position of the definite article, and no visible article is present

ex:	*mi*	*nuevo*	*libro*	SPANISH
	1SG.POSS	new.M.SG	book.M.SG	
	'my new book'			

b) One finds indefinite nominal arguments containing a postnominal possessive that has non-contrastive / "neutral" reading
(*applies to languages with prenominal structured adjectives and prenominal possessives*)

ex:	*un*	*libro*	*mio*	SPANISH
	a.M	book.M.SG	1SG.POSS.M.SG	
	'a book of mine'			

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PCL, ± 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) In nominal arguments, one finds possessives not agreeing in phi-features with the noun which are attached to a prenominal modifier and cooccur with non-pronominal non-adpositional genitives

ex:	*το*	*πρότο-μου*	*πορτρέτο*	*της*	*Μαρίας*
	to	próto-mu	portréto	tis	Marías
	the.N.SG	first.N.SG-1SG.GEN	portrait.N.SG	the.F.SG.GEN	Maria.GEN
	'My first portrait of Maria'				GREEK

b) In nominal arguments, one finds non-agreeing possessives immediately adjacent to the head noun and directly modifying it (i.e. with no linker - *only applies to languages that have argument linkers*)

ex: *sama tééré (b-i)* WOLOF
1SG book (CLASS-DEF)
'my book'

sa tééré (b-i)
2SG book (CLASS-DEF)
'your book'

(cf. also:

tééré-am (b-i)
book-3SG.POSS (CLASS-DEF)
'his/her book'

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APO, ± adjectival possessives

Distinguishes languages in which possessives have the distribution and often the agreement features of adjectives (e.g., Italian, some dialects of Sicily, 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) One finds postnominal possessives that cooccur with articles/demonstratives/quantifiers/numerals and are constructed in the same way as postnominal adjectives (with or without a linker, with or without reduplication of the article, etc., depending on the language)

ex: *a* *màchina* *mia* RAGUSA
the.F.SG car.F.SG 1SG.POSS.F.SG
'my car'
Compare to: *a* *màchina* *nova*
the.F.SG car.F.SG new.F.SG
'the new car'

καὶ *ὅτι* *αὕτη* *ἐστὶν* *ἡ* CLASSICAL GREEK
and that DEM.F.SG.NOM be.3SG the.F.SG.NOM
διαβολὴ *ἡ* *ἐμὴ*
denigration.F.SG.NOM the.F.SG.NOM 1SG.POSS.F.SG.NOM
'and that this is the denigration of me'
(Plato 24 a 8, adapted from Guardiano and Stavrou 2019: 151)
Compare to: *τὴν* *φύσιν* *τὴν* *ἀνθρωπίνην*
the.F.SG.ACC nature.F.SG.ACC the.F.SG.ACC human.F.SG.ACC
'the human nature'
(Plato 191 d 3, adapted from Guardiano and Stavrou 2019: 149)

b) One finds prenominal possessives that cooccur with articles/demonstratives/quantifiers/numerals and are constructed in the same way as prenominal adjectives (with or without a linker, with or without reduplication of the article, etc., depending on the language)

ex: *Gianni ha* *incontrato* *(i)* *tre* *nuovi*
Gianni has.3SG met the.M.PL three new.M.PL
amici *americani*
friend.M.PL American.M.PL
'Gianni met (the) three new American friends' ITALIAN

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Gianni ha	*incontrato*	*(i)*	*tre*	*suoi*	
Gianni have.3SG	met	the.M.PL	three	3SG.POSS.M.PL	
amici	*americani*				
friend.M. PL	American.M.PL				

'Gianni met his three American friends/three American friends of his'

ho	*parlato*	*con*	*ogni/qualche*	*nuovo*	*studente*
have.1SG	spoken	with	every/some	new.M.SG	student.SG

'I spoke with every new student/some new students'

ho	*parlato*	*con*	*ogni/qualche*	*mio*	*studente*
have.1SG	spoken	with	every/some	1.SG.POSS.M.SG	student.SG

'I spoke with every/some student of mine'

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WAP, ± Wackernagel possessives

Distinguishes languages that exhibit possessives licensed as bound morphemes enclitic on the determiner (essentially as 2nd 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)

Manifestations

Is any of the following true in the language?

a) One finds prenominal possessives not agreeing in phi-features with the head noun and occurring between a visible determiner and a cardinal numeral

ex: *u mo libbru / a mo casa* RAGUSA
the.M.SG 1SG.POSS book.M.SG the.F.SG 1SG.POSS house.F.SG
'my book' / 'my house'

i mo tri llibbra / i mo tri ccasi
the.PL 1SG.POSS three book.PL / the.PL 1SG.POSS three house.PL
'my three books' / 'my three houses'

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AGE, ± adjectival Genitive

Distinguishes languages that productively form adjectives from personal proper names and common nouns (like 'John, Mary, president etc.') and these adjectives can have 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) One finds nominal whose internal argument is realized as an adjective derived from a proper name or a common noun

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

b) One finds nominals where an argument adjective binds non-null personal anaphoric/pronominal expressions

ex:	*Jovan-ova*$_i$	*strašna*	*priča*	*o*	*seb-i*$_i$	SERBO-CROAT
	Jovan-POSS.ADJ	terrible	story	about	self-LOC	
	'Jovan's terrible story about himself'					

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OPK, ± null possessive licensing article with kinship nouns
Distinguishes languages in which a definite article introducing kinship nouns can be understood as a possessive (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) One finds singular kinship nouns introduced by a definite article and no visible possessive licensing a (3rd person) understood pronoun that can be interpreted as bound

ex:	*Gianni è*	*andato*	*a*	*trovare*	*il*	*nipote* ITALIAN
	Gianni be.3SG	gone.M.SG	to	visit	the.M.SG	nephew.M.SG
	'Gianni visited his nephew'					

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TSP, ± split demonstratives

Distinguishes languages in which demonstratives appear as 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, Malagasy) 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) The language has deictically neutral demonstratives that are formally distinct from those which encode deictic relations

ex:	*il*	*trouva*	*un*	*champignon*	*et*	*fut*		*étonné*
	3SG	find.3SG.PST	a.M	mushroom	and	be.3SG.PST		surprised
	car	*ce*	*champignon*	*était*		*très*	*rare*	
	because	DEM	mushroom	be.3SG.PST		very	rare	
	dans	*la*	*région*					
	in	the.F.SG	region					FRENCH

'He found a mushroom and was surprised because this/that mushroom was very rare in the region' (adapted from Corblin 1985: 386)

(as opposed to:

passez	*moi*	*ce*	*livre*	*ci / là*
give.2SG	1SG.DAT	DEM	book	here/there

'give me this/that book')

b) One finds deictic demonstratives realized as two separate words, one a copy of the other (the one at the boundary of the nominal possibly phonologically reduced)

ex:	*ss'*	*omə*	*quessə*	/	*ll'*	*omə*	*quellə*	TERAMANO
	DEM	man	DEM.M.SG		DEM	man	DEM.M.SG	

'that man (near you)' / 'that man'

c) One finds deictically neutral demonstratives realized as two separate words

ex:	*cla*	*ca*	*le*	*con*	*an*	*grand*	*gjarden*
	DEM.F.SG	house.F.SG	there	with	a.M	big	garden
	l'	*e*	*che*	*davsen*			
	3SG.CLI	be.3SG	here	closeby			

'That house with a big garden is closeby' CASALASCO

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TDP, ± split non-deictic demonstratives

Distinguishes languages in which demonstratives appear as 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?

a) One finds deictically neutral demonstratives realized as two separate words

ex:	*cla*	*ca*	*le*	*con*	*an*	*grand*	*gjarden*
	DEM.F.SG	house.F.SG	there	with	a.M	big	garden
	l'	*e*	*che*	*davsen*			
	3SG.CL	be.3SG	here	closeby			

'That house with a big garden is closeby' CASALASCO

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TDC, ± 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., English, German, Italian) from languages in which they cooccur with a definite article (e.g., Greek, Celtic, Semitic)

Manifestations

Is any of the following true in the language?

a) One finds demonstratives occurring at the boundary of an articleless nominal argument

ex: *I bought this/that nice little book with the red cover*
I bought these/those three nice little books with the red cover

ho	*comprato*	*questo/quel*		*bel*	*libro*	*di*	
have.1SG	bought	DEM.M.SG/DEM.M.SG		nice	book.M.SG	of	
arte	*con*	*la*	*copertina*	*rossa*			ITALIAN
art.SG	with	the.F.SG	cover.F.SG	red.F.SG			

'I bought this/that nice art book with the red cover'

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TSA, ± structured demonstratives (adjectival)
Distinguishes languages in which demonstratives can appear phrase-internally, in 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) One finds demonstratives following the noun and preceding 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*	*hādā*	*li-l-walad-i*	ARABIC
	the-teacher-NOM	DEM	of-the-boy-GEN	
	'this teacher of the boy'			

b) One finds demonstratives occurring sometimes to the right and sometimes 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
	1SG.NOM	lost-F.SG	three	DEM.PL.ACC	pencil-SG.GEN	
	'I lost those three pencils'			(discourse anaphoric/*deictic)		
	ja	*poterjal-a*	*te*	*tri*	*karandaš-a*	
	1SG.NOM	lost-F.SG	DEM.PL.ACC	three	pencil-SG.GEN	
	'I lost those three pencils'			(?discourse anaphoric/deictic)		

c) One finds demonstratives occurring between a noun bearing a definiteness affix and an adjective
(*applies to languages with phrase-initial determiners and phrase-initial enclitic definite articles*)

ex:	*copil-ul*	*acest-a*	*frumos*				ROMANIAN
	child-the.M.SG	DEM.M.SG-A	lovely.M.SG				
	'this lovely child'						
	kniga-ta	*onazi*	*chervena(-ta)*	*ne*	*ja*	*xaresax*	BULGARIAN
	book-the	DEM	red(-the)	NEG	1SG	like	
	'that red book I didn't like'						

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TAR, ± unstructured demonstratives (adjectival)
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 (e.g., most of Romance, Wolof)

Manifestations

Is any of the following true in the language?

a) Demonstratives and adjectives/Genitives/relative clauses/numerals/PPs are freely ordered

ex: *el* *libro* *(viejo/nuevo)* *ese* SPANISH
the.M.SG book.M.SG old.M.SG/new.M.SG that.M.SG
(viejo/nuevo)
old.M.SG/new.M.SG
'that old/new book' (Battlori and Roca 2000: 246)

el *livro* *(de matematicas)* *ese/nuevo*
the.M.SG book.M.SG of mathematics DEM.M.SG/new.M.SG
(de matematicas)
of mathematics
'that/the new math book' (adapted from Bernstein 2001: 15 and 25)

b) One finds demonstratives preceding articles of numerals in languages with phrase-initial determiners reduced relative clauses can also precede articles/numerals

ex: *αυτό* *το* *πεδί* GREEK
aftó *to* *peði*
DEM.M.SG the.M.SG kid.M.SG
'this kid'

Compare with:
το *ψιλό* *το* *πεδί*
to *psiló* *to* *peði*
the.M.SG tall.M.SG the.M.SG kid.M.SG
'the tall kid'

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TLC, ± 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?

a) One finds phrase-initial demonstratives

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

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TND, ± long distance D-checking demonstratives

Distinguishes languages in which demonstratives can mark the definiteness of the nominal argument at a distance, i.e. from an internal position (e.g., Hebrew), from languages in which a visible article is required (e.g., Arabic, Irish, Welsh)

Manifestations

Is any of the following true in the language?

a) In articleless nominal arguments, one finds demonstratives not occurring at the boundary

ex.	*bayit/more*	*ze*	*shel*	*Dan*	HEBREW
	house/teacher	DEM	of	Dan	
	'this house of Dan's/this teacher of Dan's'				

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TDA, ± definiteness spread to adjectival demonstratives

Distinguishes languages in which definiteness is spread to adjectival demonstratives (i.e., demonstratives that have the distribution of adjectives), 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?

a) One finds adjectival demonstratives 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-DEM	with	two	gardens	

'that nice house with two gardens'

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TNL, ± DP under Loc

Distinguishes languages in which the whole nominal phrase including the article (if present in the language) follows the demonstrative that marks its boundary (e.g., Hungarian, Finnish, Polish, Arabic, Classical Greek) from languages in which the whole nominal phrase precedes such demonstratives (e.g., French, some Romance dialects of Italy, Chickasaw)

Manifestations

Is any of the following true in the language?

a) One finds demonstratives occurring phrase-initially (and cooccurring with definite articles, if any)

ex. *tama* *mies* FINNISH
DEM.NOM man.NOM
'this man'

ez *a* *kedves* *öreg* *ember* HUNGARIAN
DEM the kind old man
'this kind old man'

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