

TOWARDS A TYPOLOGY OF CASE IN HEAD-MARKING LANGUAGES

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1. Goals

An investigation of the relations between clause-level dependent-marking (flagging) and head-marking (indexing) attested in the languages of the world.

Despite the existence of some empirical generalizations and theoretical claims on this issue (see 3), there is still much to be done, especially on the empirical side.

Some particular questions:

- how frequent are languages with both head- and dependent-marking?
- which types of distribution of flagging and indexing recur cross-linguistically and with which frequency?
- what are (if any) general tendencies in the ways languages align and distribute flagging and indexing?
- what (if anything) motivates rare and “deviant” patterns of interactions between head- and dependent marking attested in individual languages?

2. Definitions

Case: “a system of marking dependent nouns for the type of relationship they bear to their heads” (Blake 2001: 1).

- preferably expressed by bound morphemes, but not necessarily: languages with sufficiently grammaticalized adpositions are also considered (though not as systematically as languages with morphological case);
- need not necessarily distinguish between core syntactic relations (S, A, P): ‘peripheral’ (or ‘borderline’, Iggesen 2008) case systems are of particular interest.

Head-marking (Nichols 1986): indexing of such properties of arguments as person/number/gender/class on their syntactic heads.

- only verbs are considered;
- no less than two arguments must be able to be indexed simultaneously²;
- at least some 3rd person Objects (i.e. transitive Patients, ditransitive Themes or Recipients etc.) must be indexed by **overt** (non-zero) morphemes;
- preferably expressed by affixes on the verb, but pronominal clitics, including non-verb-adjacent clitics, are also considered;
- pronominal indices must be able to co-occur with overt NP arguments (grammatical, but not anaphoric, agreement (Bresnan & Mchombo 1986), or ‘clitic doubling’, or Stages II and III in Creissels 2005’s terms).

¹ This is an updated version of the talk (with the same title) at *Case in and Across Languages*, Helsinki, August 28 2009.

² However, South Paiute with only one argument indexed is included, too, because of the exceptional pattern of agreement, see Section 9.3.

3. What is known and being claimed?

In functional-typological work:

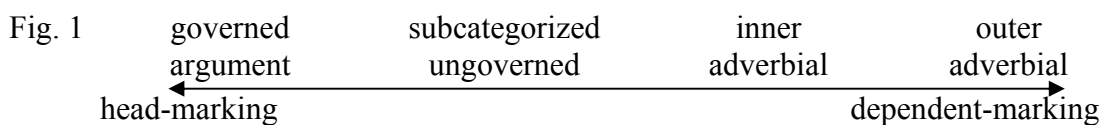
- In monotransitive constructions, accusative indexing can co-occur with ergative flagging, but not the other way round (Dixon 1979, 1994 etc.), but cf. South Paiute.
- In ditransitive constructions, secundative indexing may co-occur with indirective flagging, but not the other way round (Siewierska 2003; Haspelmath 2006).
- Bakker & Siewierska (2009: 300) hierarchy of double marking:

$$A > P > R$$

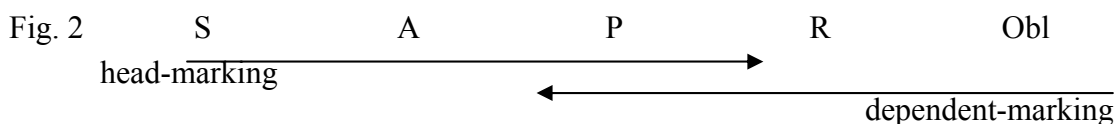
“[O]vert case and agreement marking of both A and P is quite exceptional. Overt marking by case and agreement of each of the three arguments in a ditransitive clause does not seem to be attested” (ibid.: 302);

“[T]he likelihood of an argument displaying both overt case and agreement marking declines as we progress down the argument hierarchy” (ibid.).

- Nichols (1986: 75): a hierarchy of construction types favouring head- vs. dependent-marking:



- A finer-grained representation of the left-most segment of Fig. 1:



- Pronominal affixes in head-marking languages “are functional analogs of case affixes in dependent-marking languages and can be understood and glossed in terms of cases: nominative, ergative, accusative, and the like”(Kibrik Ms: 13).

In formal generative work³:

- “NPs do not have grammatical Case in any polysynthetic language” (Baker 1996: 132).
- “There is no true ergative agreement” (Woolford 2006: 304).
- “Overt case is inversely related to overt agreement” (Markman 2006), cf. Fig. 2.

4. The database and the sample

The current database includes 75 languages from 38 language families + 9 isolates. Each language is coded for the following features (if data is available):

- number of cases⁴;
- maximal number of arguments simultaneously indexed on the verb;
- monotransitive and ditransitive alignments of flagging and indexing;
- instances when overtly case-marked arguments are overtly indexed.

The study ultimately aims at the broadest empirical coverage possible, ideally hoping to include **every** language satisfying the conditions stated in Section 2 (impressionistically, it seems that the number of languages satisfying these conditions must not be too high).

³ I am necessarily simplifying since all ‘formalist’ generalizations crucially hinge on particular definitions of such notions as ‘agreement’, ‘structural case’ etc.

⁴ Not for all languages the data is uncontroversial. Normally, only the most grammaticalized layers of case-markers are taken into account.

The sample (genetically stratified: one family – one language):

Eurasia (11): Adyghe (North-West Caucasian), Alutor (Chukotko-Kamchatkan), Basque (isolate), Belhare (Sino-Tibetan), Burushaski (isolate), Georgian (Kartvelian), Hungarian (Uralic), Ket (Yenisseyan), Modern Greek (Indo-European), Mundari (Munda), Sumerian (isolate)

Africa (2): Amharic (Semitic), Kabyle (Berber)

North and Meso America (9): Aleut (Eskimo-Aleut), Choctaw (Muskogean), Coahuilteco (isolate), Diegueño (Yuman), Karok (Karok-Shasta), Southern Paiute (Uto-Aztecan), Lower Umpqua (Siuslawan), Southern Tiwa (Kiowa-Tanoan), Tarascan (isolate)

South America (6): Cayuvava (isolate), Macushi (Carib), Mapudungun (Araucanian), Yanésa' (Arawakan), Yanomami (Yanomam), Yurakaré (isolate)

Australia (6): Bininj Gun-wok (Gunwingguan), Djaru (Pama-Nyungan), Gooniyandi (Bunaban), Malakmalak (Daly), Nyigina (Nyulnyulan), Ungarinjin (Wororan)

New Guinea and Oceania (10): Bilua (Central Solomon), Hua (Gorokan), Kaki Ae, Kwomtari (Arai-Kwomtari), Manambu (Sepik), Menya (Angan), Sentani (East Bird's Head-Sentani), Tauya (Madang), Toqabaqita (Austronesian), Yimas (Ramu-Lower Sepik)

Examples from languages not included into the sample are marked by Δ .

5. General overview

Table 1. Number of cases

No. of cases	No. of langs.	Example
2	12	Burushaski, Kabyle, Yimas, Mapudungun, Choctaw, Aleut
3–4	4	Modern Greek, Coahuilteco, Kaki Ae, Yanomami
5–8	11	Mundari, Tarascan, Malakmalak, Kwomtari
> 8	16	Alutor, Manambu, Gooniyandi, Lower Umpqua

➤ Head-marking languages favour moderate and rich case systems.

Table 2. Number of participants indexed on the verb

No. of indices	No. of langs.	Example
2	26	Amharic, Burushaski, Diegueño, Manambu, Mapudungun
3	11	Basque, Yimas, Southern Tiwa, Ungarinjin, Yurakaré
> 3	3	Adyghe, Sumerian, Choctaw

➤ Among the rich agreement languages (3 or more arguments cross-referenced on the verb) there are both languages with poor (Yimas) and rich (Basque, Sumerian) case systems.

Table 3. Alignment of monotransitive flagging

Alignment	No. of langs.	Example
Accusative	10	Amharic, Hungarian, Southern Paiute, Manambu
Ergative	14	Adyghe, Gooniyandi, Yanomami, Karok, Djaru
Marked-nominative ⁵	3	Kaki Ae, Diegueño, Choctaw
Neutral	12	Ket, Ungarinjin, Yimas, Southern Tiwa, Mapudungun
Active	2	Nyigina, Tauya
Split ⁶	3	Georgian, Kabyle, Aleut

➤ Among the head-marking languages ergativity seems to be more frequent than in the world in general, cf. the WALS data (Comrie 2008):

accusative: 46 marked-nominative: 6 ergative: 32

⁵ See König 2006, Handschuh in prep.

⁶ Splits based on person or definiteness are not considered.

6. The typology

Three major types of distribution of case marking and verb agreement:

Type A: (almost) complementary distribution of flagging and indexing, i.e. if a NP bears overt case marker, it cannot be cross-referenced on the verb (in some languages the reverse implication is also true).

Type B: (almost) exact matching of flagging and indexing, i.e. particular case on the NP corresponds to a dedicated type of verbal pronominal markers.

Type C: systematic mismatches between flagging and indexing (e.g. splits of well-known types).

➤ The types (especially type B) are fairly idealized constructs, from which individual languages deviate to different degrees. In particular, the boundaries between types B and C are fuzzy (so perhaps classifying some languages as B/C might be reasonable).

Table 5. Distribution of the types

Type	No. of langs.	Example
A	12	Ket, Ungarinjin, Bargam, Southern Tiwa, Mapudungun
B	12	Amharic, Hungarian, Menya, Coahuilteco
C	20	Georgian, Gooniyandi, Sentani, Choctaw, Yanomami

7. Type A languages

7.1. Overview

Eurasia: Ket, Mundari

Australia: Ungarinjin, Bininj Gun-wok

Oceania: Bilua, Toqabaqita, Yimas

North America: Southern Tiwa

South America: Cayuvava, Mapudungun, Yanesha', Yurakaré

Core alignment: neutral (other types logically excluded)

➤ In accordance with Fig. 2, head-marking is available for the core arguments (S, A, P, often R, too), while dependent-marking is reserved for peripheral participants.

7.2. Type of case-system

➤ One general oblique case used in a wide variety of functions (Yimas, Cayuvava, Mapudungun) vs.

➤ A more or less rich system of peripheral case-markers (e.g. 8 cases in Ungarinjin, 9 cases in Ket and Bilua, ca. 10 cases in Yanesha' and Southern Tiwa, and even more in Bininj Gun-wok)

YIMAS (Ramu-Lower Sepik, Papua New Guinea)

Core participants (including ditransitive Themes and Recipients) are indexed on the verb and bear no case-marking:

- (1) *ɲaykum*₁ *makaw*₂ *panmal*₃ *wa*₂-*mpu*₁-*ɲa-r-akn*₃.
 woman(PL) fish man 3SG.P-3PL.A-give-PRF-3SG.IO
 'The women gave the man makau.' (Foley 1991: 228)

Oblique case marker *-n/-pan* can encode instrument (2a), location (2b), time (2c), and is used with postpositions (2d):

- (2) a. *kanj-k-pan* *na-ka-warapa-kia-k*.
 shell(PL)-OBL 3SG.P-1SG.A-cut-TNS-IRR
 'I cut him with shells.' (ibid.: 166)

- b. *ɲajk-ɲan ama-na-irm-n.*
 grass(PL)-OBL 1SG.S-DFV-stand-PRS
 ‘I am standing in the grass.’ (ibid.)
- c. *tmat-ɲan nma-kay-wark-wat.*
 day-OBL house:P-1PL.A-build-HAB
 ‘We always build a house during the day.’ (ibid.: 169)
- d. *irpm-un akpɲan na-na-irm-n.*
 coconut.palm-OBL behind 3SG.S-DFV-stand-PRS
 ‘He is standing behind the coconut palm.’ (ibid.)

BININJ GUN-WOK (Gunwinguan; North Australia): the peripheral cases (Evans 2003: 155–162):

suffixes: Ablative *-be(h)*, Instrumental *-yi(h)*, Genitive *-gen/-ken(h)*, Locative *-ga/-ka(h)*, Comitative *-dorreng(h)*, Privative *-yak*, and some others;
 prefixes: Locative *gu-/ku-*, Manner *(m)an-* and some others.

7.3. Number of verbal indices and non-cross-referenced core arguments

3 participants indexed on the verb (normally including both Theme and Recipient): Yimas, Southern Tiwa, Ungarinjin, Toqabaqita, Yurakaré, possibly Yanasha⁷.

2 participants indexed on the verb: Ket, Mundari, Bilua, Cayuvava, Bininj Gun-wok, Mapudungun.

With ditransitives, several situations are possible, see Table 6.

Table 6. Marking ditransitive objects in type A languages

Head-marking	Dependent-marking	No marking	Example
Theme, Recipient			Yimas (1), Yurakaré
Theme	Recipient		Toqabaqita (3)
Recipient	Theme		non-attested
Recipient		Theme	Bilua, Bininj Gun-Wok, Mundari (5a), Mapudungun (4)
Theme		Recipient	Mundari (5b)

TOQABAQITA (Austronesian > Oceanic, Solomon Islands)

- (3) *Fale-a₁ tai fa qota₁ qi a-na wane qena.*
 give-3.OBJ some CLF areca.nut LOC REC-3 man that
 ‘Give some areca nuts to the man.’ (Lichtenberk 2008: 495)

MAPUDUNGUN (Araucanian, Chile)

- (4) *Maria pūto-l-fi₁-y ko Rosa₁.*
 Maria drink-CAUS-3SG.OBJ-3SG.SBJ water Rosa
 ‘Maria made Rosa drink water.’ (Smeets 2008: 349)

MUNDARI (Munda; Eastern India): both Theme and Recipient can be cross-referenced, but never both:

- (5) a. *am seta-ko = ñ om-a-m-ta-n-a.*
 2SG dog-PL=1SG.SBJ give-BEN-2SG.OBJ-PROG-ITR-IND
 ‘I am giving the dogs to you.’ (Osada 2008: 122)
- b. *am seta-ko = ñ om-ke-d-ko-a.*
 2SG dog-PL=1SG.SBJ give-COMPL-TR-3PL.OBJ-IND
 ‘I gave the dogs to you’ (ibid.)

⁷ Situation in Yanasha’ is not clear, Duff-Tripp (1997) being not explicit on this matter.

➤ In many languages, Theme is neither cross-referenced nor case-marked. Marking of Theme as an oblique participant (cf. the situation in the Salish languages, Kroeber 1999: 43) is so far unattested. For the motivation of the rarity of secundative flagging in general, see Haspelmath (2006: 8).

➤ In languages with only two indices on the verb, more than one NP in the clause may be both non-cross-referenced and non-case-marked.

Δ ALAMBLAK (Sepik, Papua New Guinea): “The outer object, the non-coreferenced and non-case-marked noun phrase, functions to designate the non-agentive object which can be thought of as an important participant in the situation predicated by the clause, although of comparatively less prominence than the undergoer” (Bruce 1984: 220)

(6) *yima-r* *yën-f₁* *yemrë-m* *nëngay-t* *këmbri-hay-më-r-f₁*.
 person-3SG.M child-3DU meat-3PL dish-3SG.F put.in-BEN-PST-3SG.M.SBJ-3DU.OBJ
 ‘A man put meat into a dish for children.’ (ibid.: 221)

7.4. Argument structure alternations can be also revealing:

Promotion to core involves simultaneous dropping of case marking and appearance of verbal indexing; when demoted, NPs are no longer cross-referenced but get case marking.

SOUTHERN TIWA (Kiowa-Tanoan, USA)

(7) a. *seuan-ide* *i-musa-wia-ban* *hliawra-de-ʔay*.
 man-SG 3SG.A/3.P-cat-give-PST woman-SG-ALL
 ‘The man gave cats to the woman.’ (Frantz 1995: 80)
 b. *hliawra-de* *am-musa-wia-che-ban* *seuan-ide-ba*.
 woman-SG 3.S/3SG.IO-cat-give-PASS-PST man-PL-INS
 ‘=7a’ (ibid.)

7.5. Deviations from type A: marginal indexing of overtly case-marked arguments

BININJ GUN-WOK: Ablative and Instrumental may be used to mark transitive Agents, especially inanimate (8a) or when ambiguity may arise (8b):

(8) a. *gubunj-be* *ba-gubunj-djirrka-ng*.
 canoe-ABL 3SG.SBJ/3SG.OBJ-canoe-push-PST.PRF
 ‘One canoe pushed another.’ (Evans 2003: 138)
 b. *Kodjok* *bi-karme-ng* *Kamarrang-yih*.
 kin_name 3SG.SBJ/3SG.OBJ-grab-PST.PRF kin_name-INS
 ‘Kamarrang grabbed Kodjok.’ (ibid.: 140)

YURAKARÉ (isolate, Bolivia): objects introduced by the comitative applicative and cross-referenced by the object prefixes may marginally retain postpositional marking:

(9) *më-jti* *lëtta-m* *ku-winani-shta-m* *mi-ye = tina*.
 you-only one-2SG.SBJ 3SG.OBJ+APPL-walk-FUT-2SG.SBJ 2SG-sister-COM
 ‘You will be the only one that is going to live [sic!] together with your sister.’ (van Gijn 2005: 60)

Type A languages show the most straightforward division of labour between head- and dependent-marking: indexing relates to the core syntactic arguments, whereas flagging is restricted to adjuncts. The comparative rarity of such systems is probably explained, *inter alia*, by the tendency to employ case marking for disambiguation of core participants, as in Bininj Gun-wok.

8. Type B languages

8.1. Overview

Eurasia: Adyghe, Basque, Hungarian, Modern Greek

Africa: Amharic

Oceania: Kwomtari, Manambu, Menya, Kaki Ae

North America: Aleut, Coahuilteco, Yanomami

Core alignment:

accusative: Hungarian, Modern Greek, Amharic, Coahuilteco, Kwomtari, Manambu, Menya

marked-nominative: Kaki Ae

ergative: Adyghe, Basque, Yanomami

split: Aleut

➤ The predominance of nominative-accusative type-B systems is not surprising: in this type verbal and nominal alignments must be identical, and ergativity in the verbal domain is rare (Siewierska 2008)

Number of cases:

2: Aleut, Amharic (but prepositions are also relevant), Adyghe

3–4: Modern Greek, Kaki Ae, Coahuilteco, Yanomami⁸

6–8: Kwomtari

>8: Basque, Hungarian, Manambu, Menya

Number of participants indexed on the verb:

2: Hungarian, Kaki Ae, Kwomtari, Manambu, Menya, Coahuilteco, Yanomami, Amharic, Aleut

3: Basque, Modern Greek

>3: Adyghe

➤ How and to what degree is the matching between case marking and verb agreement realized?

ADYGHE (North-West Caucasian, Russia, Turkey): Absolutive vs. Oblique case (marks all kinds of non-absolutive arguments) corresponds to the Absolutive vs. Agent vs. Indirect Object series of verbal agreement prefixes (3rd pers. Absolutive and 3Sg Indirect Object prefixes are zero). Note that all oblique arguments (up to three) are introduced by applicative prefixes.

- (10) a. *pšaše-m₁ č'ale-r₂ Ø₂-j₁-e-λeβ^w.*
girl-OBL boy-ABS 3.ABS-3SG.A-PRS-see
'The girl sees the boy.' (fieldwork notes)
- b. *č'ale-xe-m₁ pšaše-xe-m₂ txəλə-r₃ Ø₃-a₂-r-a₁-tə-β.*
boy-PL-OBL girl-PL-OBL book-ABS 3.ABS-3PL.IO-APPL-3PL.A-give-PST
'The boys gave the book to the girl.' (fieldwork notes)
- c. *wəne-m₁ Ø-Ø₁-jə-s-šə-š't.*
house-OBL 3.ABS-3SG.IO-LOC-1SG.A-lead.out-FUT
'I will lead him out of the house.' (based on Smeets 1992: 111)
- d. *ʔ^wefə-r₁ č'ale-xe-m₂ Ø₁-a₂-fe-s-šə-β.*
work-ABS boy-OBL 3.ABS-3PL.IO-BEN-1SG.A-do-PST
'I did the work for the boys.' (based on Smeets 1992: 124)

Whenever any valency changing operation affects the syntactic roles of the arguments, this is reflected both in flagging and in indexing, cf. two different transitive/antipassive pairs:

⁸ Strangely enough, all the languages with 3–4 cases in my sample (and, with one exception, in my database) belong to type B.

in (10) the former Absolutive P is demoted to the oblique argument, whereas in (11) it is expressed as an Instrumental postpositional adjunct and does not trigger verbal agreement:

- (11) a. *çəfə-m₁ txələ-r₂ Ø₂-ə₁-šə-Ɂ.*
 man-OBL book-ABS 3.ABS-3SG.A-read-PST
 ‘The man read the book (to completion).’ (Arkadiev & Letuchiy 2008: 82)
- b. *çəfə-r₁ txələ-m₂ Ø₁-je₂-š-a-Ɂ.*
 man-ABS book-OBL 3.ABS-3SG.IO+APPL-read-AP-PST
 ‘The man read from the book.’ (ibid.)
- (12) a. *he-m₁ lə-r₂ Ø₂-j₁-e-šxə.*
 dog-OBL meat-ABS 3.ABS-3SG.A-PRS-eat
 ‘The dog is eating the meat.’ (ibid.: 81)
- b. *he-r₁ lə-č’e ma₁-šx-e.*
 dog-ABS meat-INS 3.ABS+PRS-eat-AP
 ‘The dog feeds on meat.’ (ibid.)

Such clear-cut situations as the one found in Adyghe are rare. Usually various minor mismatches are attested; the more general the nature of these mismatches, the closer is the system to type C.

AMHARIC (Semitic, Ethiopia): the verb obligatorily agrees with the subject (unmarked) and optionally agrees with a definite direct object (13a) marked by the Accusative. Indefinite direct objects are unmarked and never trigger agreement (13b).

- (13) a. *lämma tärmus-u-n säbbär-ä-(w).*
 L. bottle-DEF-ACC break:PRF-3SG.M.SBJ-(3SG.M.OBJ)
 ‘Lemma broke the bottle.’ (Amberber 2005: 299⁹)
- b. *lämma and tärmus säbbär-ä-(*w).*
 L. one bottle-DEF-ACC break:PRF-3SG.M.SBJ-(3SG.M.OBJ)
 ‘Lemma broke one bottle.’ (ibid.)

The verb may also agree with two kinds of oblique objects, i.e. instruments¹⁰ (14a) and benefactives (14b), each realized by a special series of markers, both dependent and head; no more than two agreement affixes are allowed at a time.

- (14) a. *almaz b-addisu ərsasə-wa şaf-äčč-əbb-ät.*
 Almaz with-new pencil-3SG.F.POSS wrote-3SG.F.SBJ-INS-3SG.OBJ
 ‘Almaz wrote with her new pencil.’ (Leslau 1995: 430)
- b. *ənnatəyya-wa lä-ləğo-čč-əwa šänkora agäda gäzza-čč-əll-aččäw.*
 mother-DEF.F to-child-PL-3SG.F.POSS sugar.cane stalk bought-3SG.SBJ-BEN-3PL.OBJ
 ‘The mother bought sugar cane for her children.’ (Leslau 1995: 429–430)

With ditransitives, the situation is more complex. Both Theme and Recipient may be marked Accusative, cf. (15a), but in this case only the Recipient triggers verb agreement, and this agreement is now obligatory (Amberber 2005: 301). In addition to this, Recipient marked by the preposition *lä-* may also trigger agreement, which, in contrast to the Benefactive agreement in (14b), is realized by the plain object pronominal suffix, cf. (15b).

⁹ The transcription of examples from Amberber (2005) is modified to comply with the traditional transcription adopted by Leslau (1995). The same applies to Ge’ez below.

¹⁰ Actually, the *bä-* phrases are not limited to the instrumental function and may denote various semantic roles, see Leslau (1995: 425–433).

- (15) a. *lǝǧ-u-n* *bet-u-n* *asayy-ä-w.*
 child-DEF.M-ACC house-DEF.M-ACC showed-3SG.M.SBJ-3SG.OBJ
 ‘He showed the house to the child.’ (ibid.: 893)
- b. *lä-lǝǧ-u* *bet-u-n* *asayy-ä-w.*
 to-child-DEF.M house-DEF.M-ACC showed-3SG.M.SBJ-3SG.OBJ
 ‘=11b’ (ibid.)

Table 7. Head- and dependent-marking in Amharic

Dependent-marking	Head-marking
zero (subject)	subject series
zero (object)	—
Accusative	object series
<i>lä-</i>	<i>lä</i> -series (benefactive) object series (recipient)
<i>bä-</i>	<i>bä</i> -series

➤ Note that in Amharic there are three different sets of object agreement markers, but only one of them can appear in a verbal form at a time. This suggests that it is important to pay attention not only to the number of arguments which may be simultaneously indexed in the verb, but also to the number of paradigmatically opposed agreement patterns.

8.2. Three-way systems: considerably rare, presumably because they involve doubling of information and increase of morphological complexity. In some languages, e.g. Modern Greek, the full triple-agreement system is used only under special discourse conditions (see e.g. Mackridge 1985: 221–225).

BASQUE (isolate, Spain, France): Ergative, Absolutive and Dative cases and person/number indices

- (16) a. *ni-k₁* *aita-ri₂* *diru-a₃* *eska-tu* *d₃-io₂-t₁.*
 1SG-ERG father-DAT money-ABS.SG ask-PRF 3.ABS-3SG.DAT-1SG.ERG
 ‘I have asked father for (some) money.’ (Saltarelli 1988: 238)
- b. *zu-k₁* *aita-ri₂* *diru-a₃* *eska-tu* *d₃-io₂-zu₁.*
 2SG-ERG father-DAT money-ABS.SG ask-PRF 3.ABS-3SG.DAT-2SG.ERG
 ‘You have asked father for (some) money.’ (ibid.)
- c. *ni-k₁* *aita-ri₂* *eskutitz-ak₃* *eska-tu* *d₃-izk₃-io₂-t₁.*
 1SG-ERG father-DAT letter-ABS.PL ask-PRF 3.ABS-PL.ABS-3SG.DAT-1SG.ERG
 ‘I have asked father for the letters.’ (ibid.)
- d. *ni-k₁* *zu-ri₂* *diru-a₃* *eska-tu* *d₃-izu₂-t₃.*
 1SG-ERG you-DAT money-ABS.SG ask-PRF 3.ABS-2SG.DAT-1SG.ERG
 ‘I have asked you for (some) money.’ (ibid.)

MODERN GREEK (Indo-European, Greece): Nominative ~ obligatory verbal agreement inflections; Accusative ~ accusative clitics (used with topical direct objects); Dative¹¹ ~ Dative clitics (used with non-focused indirect objects):

- (17) *To* *vivlio₁* *tis₂ = to₁ = e-dho-s-a*
 DEF:ACC.SG.N book:ACC.SG 3SG.DAT.F=3SG.ACC.N=PST-give-PRF-1SG.SBJ
tis *Mari-as₂.*
 DEF:DAT.SG.F M.-DAT.SG
 ‘As for the book, I gave it to Maria’ (Mišeska-Tomić 2006: 324)

¹¹ Called ‘Genitive’ in traditional descriptions.

With ditransitives, both objects are case-marked by the Accusative, but only the Recipient may trigger agreement:

- b. *mēna-ne*₁ *eete-geni* *mamelei-le* *nifa-o*₁-*ne*.
 I-ACC this-thing crocodile-ACC give-1/2SG.OBJ-3PL.REAL
 ‘They gave me this crocodile (meat).’ (ibid.: 92)

KAKI AE (isolate, Papua New Guinea) is similar, except that the Nominative case is optional¹³:

- (23) a. *aieʔi-ro*₁ *ēa*₂ *ara-mu*₁-*ha*₂.
 fire-NOM house burn-3SG.OBJ-3SG.SBJ
 ‘The fire is burning the house.’ (Clifton 1995: 39)
 b. *aieʔi* *ara-ha*.
 fire burn-3SG.SBJ
 ‘The fire is burning.’ (ibid.)
 c. ... *nane-ro* *ara-ra-ha* ...
 fish-NOM burn-IRR-3SG.SBJ
 ‘When the fish is cooked...’ (ibid.: 69)

HUNGARIAN (Uralic, Europe): ‘subjective’ and ‘objective’ series of verbal person markers, the latter being used when the verb has a definite direct object marked with the accusative case.

- (24) a. *Bemegy-ek* *a* *régi* *ház-ba*.
 go-1SG.SBJ DEF old house-ALL
 ‘I am going into the old house.’ (Rounds 2001: 100)
 b. *Lát-ok* *egy* *ház-at*.
 see-1SG.SBJ INDEF house-ACC
 ‘I see a house.’ (ibid.: 23)
 c. *Lát-om* *a* *ház-at*.
 see-1SG.SBJ/3.OBJ DEF house-ACC
 ‘I see the house.’ (ibid.)

➤ ‘Gaps’ in the alignment of flags and indices are also attested:

Δ GE’EZ (ancient Semitic, Ethiopia): object agreement on the verb is triggered not by the only overt morphological case (Accusative) (25), but by thematic indirect (26a) and direct objects (26b) marked by the preposition *lä-*:

- (25) *ʔamṣəʔu* *ḥabe-hu* *kʷəlo* *dəwuy-ān-a* ... (Mk. 1:32)
 they.brought onto-3SG.M.OBJ all diseased-PL-ACC
 ‘they brought unto Him all that were diseased’ (Schneider 1959: 22)
 (26) a. *wa-ʔi-taʔawq-o* (< *-a + hu*) *la-qəddus* *yāred*
 and-NEG-be.known-3SG.M.SBJ+3SG.M.OBJ to-saint Yared
 ‘and Saint Yared did not know it’, lit. ‘and it was not known to Saint Yared’
 (Weniger 1999: 42)
 b. *rakab-omu* (< *a + humu*) *la-səmʕon* *wa-la-ʔəndəryās* (Mk. 1:16)
 find:PRF-3SG.M.SBJ+3PL.M.OBJ to-Simon and-to-Andrew
 ‘He saw Simon and Andrew’ (ibid.: 39)

➤ Ge’ez seems to be a counterexample to Bakker & Siewierska’s (2009) claim about overt case-marking and overt agreement, see section 2. An even clearer counterexample comes from Δ USAN (Madang; Papua New Guinea), where the only argument which can (but must not) be both overtly case-marked and indexed in the verb is the Beneficiary:

¹³ Contra Clifton (1995: 38) who labels this case ‘Ergative’ despite the fact that it can occur on intransitive as well as on transitive subjects, cf. (23c).

(27) *narau ininou munon bânâm wuri-t bâng-âtar ig-unei.*
 betelnut our man friend them-OBL put-3PL.BEN be-REMPST:1PL.SBJ
 ‘We were putting betelnut for our friends’ (Reesink 1987: 155)

8.3.2. Two (core) cases correspond to three series of agreement markers (thus, one case corresponds to two series of agreement markers): Adyghe.

8.3.3. Two series of agreement markers correspond to two non-overlapping sets of case-markers: this situation is most closely approached by Manambu.

MANAMBU (Sepik, Papua New Guinea): subjective vs. ‘topical’ agreement markers; the first are used exclusively with the zero-marked Nominative case, and only when the subject is not the topic; the second are able to cross-reference topical NPs (including subjects) bearing Nominative (28a), Accusative-Locative (28b), Allative-Instrumental (28c), Dative-Aversive (28d), and Terminative cases (Aikhenvald 2008: 63–68). Accusative marking on the topicalized object is optional.

- (28) a. *a-bər ñədi kwakuli tə-bər.*
 DEM-DU children:DU orphan become-3DU.TOP
 ‘Those (two) children became orphans.’ (ibid.: 62)
- b. *dakul wapi duañanugw-a:m kə-da:-di.*
 spirit bird male.children-ACC eat-3PL.SBJ-3PL.TOP
 ‘The spirit birds ate up male children.’ (ibid.: 149)
- c. *wun a-də yaba:-r yi-tua-d.*
 I DEM-SG.M road-ALL go-1SG.SBJ-3SG.TOP
 ‘I went towards the road.’ (ibid.: 62)
- d. *də də-kə takwa:-k ata wa-də-l.*
 he he-POSS+F.SG woman-DAT here say-3SG.M.SBJ-3SG.F.TOP
 ‘He spoke like this to his woman.’ (ibid.: 153)

ALEUT (Eskimo-Aleut, Alaska, Commander Islands): a very special case of head-dependent correspondence. In sentences where both A and P are expressed by full NPs, both are marked by the overt Absolutive case, but only A triggers verb agreement (29a). When a definite P is left unexpressed, the A gets Oblique case marking and the verb now agrees with both A and P (29b).

- (29) a. *hla-x̂₁ asxinu-x̂ kidu-ku-x̂₁.*
 boy-ABS.SG girl-ABS.SG help-PRS-3SG.SBJ
 ‘The boy is helping the girl’ (Bergsland 1997: 138)
- b. *hla-m kidu-ku-u*
 boy-OBL.SG help-PRS-3SG.A/3SG.OBJ
 ‘The boy is helping her.’ (ibid.)

In constructions with the Oblique A, it is possible to express the P by a full NP obligatorily preceding the A and functioning as a kind of topic (ibid.: 141–143), (30):

- (30) *aman sistra-ng₂ Paavila-m₁ itaangisix ayagaŋta-qa-a₁₊₂.*
 that sister-1SG.POSS Paul-OBL.SG first marry-PST-3SG.A/3SG.OBJ
 ‘That sister of mine, Paul first married her’ (and later she was married to another man)
 (ibid.)

The Oblique marking of the subject and the two-person verbal agreement occur not only in transitive sentences, but also in intransitive clauses with postpositional phrases, when the object of the postposition is thematic and left unexpressed (31a,b):

- (31) a. *qalgada-x̂* *stuuluġ-im* *kugan* *a-ku-x̂*.
 food-ABS.SG table-OBL on.top.of.it be-PRS-3SG.SBJ
 ‘The food is on the table’ (ibid.: 151)
- b. *qalgada-m* *ku-ga-n* *a-ku-u*
 food-OBL on.top.of.it be-PRS-3SG.A/3SG.O
 ‘The food is on it.’ (ibid.)

Thus, the apparently **object** agreement on the verb is strictly aligned with a special type of **subject** case-marking.

Languages of type B rarely exhibit a one-to-one correspondence between case and verbal agreement; what distinguishes them from type C languages is that the mismatches between the two systems are not pervasive and operate on a unidirectional (one-to-many, not many-to-many) basis.

The rarity of pure type B systems is probably explained by the difference in the functional load of head-marking and case.

9. Type C languages

9.1. Overview

Eurasia: Alutor, Belhare, Burushaski, Georgian, Sumerian

Africa: Kabyle

Australia: Djaru, Gooniyandi, Malakmalak, Nyigina

Oceania: Hua, Sentani, Tauya

America: Choctaw, Diegueño, Karok, Lower Umpqua, Southern Paiute, Tarascan, Macushi

Core alignment:

accusative: Sentani, Southern Paiute, Tarascan

marked nominative: Choctaw, Diegueño, Kaki Ae

ergative: Alutor, Belhare, Burushaski, Djaru, Gooniyandi, Hua, Karok, Lower Umpqua, Macushi, Malakmalak, Sumerian

active: Nyigina, Tauya

split: Georgian, Kabyle

➤ The high percentage of ergative languages in type C is explained by the fact that the majority of languages with accusative case marking fall into type B (see **8.1**).

Number of cases:

2: Burushaski, Choctaw, Karok, Southern Paiute, Macushi, Kabyle

6–8: Diegueño, Georgian, Malakmalak, Djaru, Tarascan

> 8: Alutor, Belhare, Gooniyandi, Nyigina, Sentani, Lower Umpqua, Sumerian, Tauya

Number of participants indexed on the verb:

2: the majority

3: Kabyle, Tarascan, Djaru

>3: Choctaw, Sumerian

Defining feature: A many-to-many correspondence between flagging and indexing.

KABYLE (Berber, Alger): two cases and three types of verbal indices; any case can be cross-referenced by any index and vice-versa; agreement with direct and indirect objects is available only in ‘topic’ (left dislocation) and ‘antitopic’ (right dislocation) constructions, where all nominals appear in Direct and Oblique case, respectively (Galand 1979, Mettouchi 2008).

- (32) a. *ye-fka* *we-rgaz* *a-γanim* *i* *t-meṭṭut*.
 3SG.SBJ-give OBL-man DIR-reed to OBL-woman
 ‘The man gave the reed to the woman.’ (based on Naït-Zerrad 2001: 61, 163)
- b. *a-rgaz* *ye-fka* *a-γanim* *i* *t-meṭṭut*.
 DIR-man 3SG.SBJ-give DIR-reed to OBL-woman
 ‘=32a’ (‘the man’ is topicalized) (ibid.)
- c. *a-γanim*₁, *ye*₂-*fka-t*₁ *we-rgaz*₂ *i* *t-meṭṭut*.
 DIR-reed 3SG.SBJ-give-3SG.M.DO OBL-man to OBL-woman
 ‘=32a’ (‘the reed’ is topicalized) (ibid.)
- d. *ye*₁-*fka-t*₂ *we-rgaz*₁ *i* *t-meṭṭut*, *u-γanim*₂.
 3SG.SBJ-give-3SG.M.DO OBL-man to OBL-woman OBL-reed
 ‘The man gave it to the woman, the reed.’ (ibid.)
- e. *ta-meṭṭut*₁, *ye*₂-*fka-yas*₁ *we-rgaz*₂ *a-γanim*.
 DIR-woman 3SG.SBJ-give-3SG.IO OBL-man DIR-reed
 ‘=32a’ (‘the woman’ is topicalized) (ibid.)
- f. *ye*₁-*fka-yas*₂ *we-rgaz*₁ *a-γanim*, *t-meṭṭut*₂.
 3SG.SBJ-give-3SG.IO OBL-man DIR-reed OBL-woman
 ‘The man gave her the reed, the woman.’ (ibid.)

9.2. Common sources of flagging-indexing mismatches: split ergativity and split ditransitivity (see section 3).

BURUSHASKI (Srinagar dialect; isolate, Jammu & Kashmir)

- (33) a. *um-e* *śugulu*₁ *ni:mi*₁.
 you-OBL friend(DIR) went-3SG.SBJ
 ‘Your friend went.’ (Munshi 2006: 130)
- b. *salim-e*₁ *huma*₂ *mu*₂-*ye:c-imi*₁.
 Salim-OBL Huma(DIR) 3SG.F.OBJ-saw-3SG.SBJ
 ‘Salim saw Huma.’ (ibid.: 135)
- c. *in-e*₁ *in-e-re*₂ *kīta:b-an* *e*₂-*ĉ-umo*₁.
 3SG-OBL 3SG-OBL-to book-INDEF 3SG.M.OBJ-gave-3SG.F.SBJ
 ‘She gave him a book.’ (ibid.: 139)

➤ Agreement is based on grammatical relations and topicality (note that object agreement in Burushaski is with animates only), whereas case is more sensitive to semantic roles. More or less similar situations are attested in Belhare, Malakmalak, Djaru, Gooniyandi, Hua, Tauya, Lower Umpqua, Macushi.

9.3. Less common sources of flagging-indexing mismatches

CHOCTAW (Muskogean; Central USA). Two cases: marked Nominative vs. (optional) Accusative; (at least) three sets of verbal agreement markers: Agentive, Patientive, Indirective. The Nominative case can correspond to any verbal index (34), the Accusative — at least to Patientive and Indirective (35).

- (34) a. *anako-sh* *ikhana-li-h*.
 I:FOC-NOM know-1SG.A-PRED
 ‘I am the one who knows.’ (Davies 1986: 3)
- b. *anako-sh* *sa-yimmi-h*.
 I:FOC-NOM 1SG.P-believe-PRED
 ‘I am the one who believes.’ (ibid.: 4)
- c. *anako-sh* *am-ahwa-h*.
 I:FOC-NOM 1SG.IO-think-PRED
 ‘I am the one who thinks.’ (ibid.)

- (35) *hattak-at alla-yā₁ towa-yā₂ ī₁-Ø₂-pila-tok.*
 man-NOM child-ACC ball-ACC 3.IO-3.P-throw-PST
 ‘The man threw the ball to the child.’ (ibid.: 7)

➤ Case-marking operates on a purely syntactic (subject vs. object) basis, whereas agreement is determined by semantic roles and predicate type (cf. Heath 1977).

NYIGINA (Nyulnyulan, Australia): For subjects, both case-marking and agreement operate on an “agentive/patientive” basis, but the two systems do not match each other.

- (36) a. *wamba-ni yin-marra-n waḷi.*
 man-ACT 3SG.A-burn-PRS meat
 ‘The man is cooking the meat.’ (Stokes 1982: 258)
- b. *dyunḡu-ni yi-marra-n waḷi.*
 fire-ACT 3SG.SBJ-burn-PRS meat
 ‘The fire is cooking the meat.’ (ibid.: 259)
- c. *dyunḡu yi-marra-n.*
 fire 3SG.SBJ-burn-PRS
 ‘The fire is burning.’ (ibid.: 258)
- d. *lagarr yin-di-ny wanydyarri maḡin... waladya-yi gunariny-gan balu.*
 climb 3SG.A-do-PST one woman honey-DAT wild.fig-LOC tree
 ‘One woman climbed up in the wild fig tree for honey.’ (ibid.: 130)

➤ “[W]here no second entity is significantly affected by the activity ... the [Subject] does not take the active suffix” (ibid.: 130). In the choice between the two sets of prefixal agreement markers the crucial factor is the “degree of control over the activity specified” (ibid.: 260).

Arguments not directly affected by the situation are represented by a special set of pronominal suffixes; the object is left unmarked if “unattainable” (37a), or is in the Dative case otherwise (37b):

- (37) a. *gaḡady yi-na-yina ginya wamba... yarridy yi-na-na.*
 search 3SG.A-PST-3SG.IO DEM man disappear 3SG.SBJ-sit-PST
 ‘He searched for that man ... he’d disappeared.’ (Stokes 1982: 78)
- b. *gaḡady yi-na-yina ginya-yi wamba... yim-bula-na-yina garrgudyi.*
 search 3SG.A-PST-3SG.IO DEM-DAT man 3SG.A-come-PST-3SG.IO straight
 ‘He searched for that man and came upon him straightaway.’ (ibid.: 79)

SOUTHERN PAIUTE (Uto-Aztec; Utah, USA): a unique (?) instance of an ergative agreement pattern coupled with accusative case-marking:

- (38) a. *aipač-uḡ yaxa-yi = aḡ.*
 boy-DEF cry-PRS=3SG.ABS
 ‘The boy is crying.’ (Bunte 1979: 13)
- b. *ni’ aipac-i-uḡ tona-va = ḡa.*
 1SG:NOM boy-OBL-DEF hit-FUT=3SG.ABS
 ‘I’m going to hit the boy.’ (ibid.: 17)

9.4. Type-B phenomena in type-C languages

Instances of rigid correspondence between head- and dependent-marking are found in type C languages, too.

DJARU (Pama-Nyungan, Western Australia):

Table 8. Head-marking and dependent-marking in Djaru (Tsunoda 1981: 72)

Nominal	Bound pronoun
Ergative (A)	Nominative
Absolutive (S)	
Absolutive (P)	Accusative
Dative	Dative
Locative, Allative, Ablative	Locational

S, A and P show ergative flagging and accusative indexing:

- (39) a. *ŋaʃu* *ŋa = ŋa* *jan-an* *ŋura-ŋgawu*.
 1SG:ABS AUX=1SG.NOM go-PRS camp-ALL
 ‘I go to the camp.’ (Tsunoda 1981: 141)
- b. *gujara-lu* *mawun-du*₁ *ŋa = wula*₁ = *anu*₂ *gujara* *ŋaŋiŋa*₂ *jan-an*.
 two-ERG man-ERG AUX=3DU.NOM=3PL¹⁴.ACC two woman(ABS) see-PRS
 ‘Two men see two women.’ (ibid.: 134)

With ditransitive verb ‘give’, the Recipient may be case-marked both by the Dative (40a) and by the Absolutive (40b), but the corresponding clitic is always Dative:

- (40) a. *ŋumbir-u* *ŋa = ∅ = la* *maŋari* *jambagina-wu* *juŋ-an*.
 woman-ERG AUX-3SG.ACC-3SG.DAT food(ABS) child-DAT give-PRS
 ‘A woman gives food to a child’ (ibid.: 115)
- b. *ŋumbir-u* *ŋa = ∅ = la* *jambagina* *maŋari* *juŋ-an*.
 woman-ERG AUX-3SG.ACC-3SG.DAT child(ABS) food(abs) give-PRS
 ‘=(40a)’

Animate oblique participants are invariably indexed by the special locational clitics:

- (41) a. *ŋaʃu* *ŋa = ŋa = janda* *jan-i* *mawun-dawu*.
 1SG.ABS AUX-1SG.NOM-3SG.LOC go-PST man-ALL
 ‘I went to a man’ (ibid.: 104)
- b. *ŋaʃu* *ŋa = ŋa = janda* *jaʃu* *maŋ-an* *mawun-da*.
 1SG.ABS AUX-1SG.NOM-3SG.LOC Djaru talk-PRS man-LOC
 ‘I talk Djaru to a man.’ (ibid.: 113)
- c. *mawun* *ŋa = ŋguwulala* *wuŋa* *jan-i* *junbulanjiŋ-ŋu*.
 man(ABS) AUX-2DU.LOC away go-PST 2DU-ABL
 ‘A man went away from you (two)’ (ibid.: 115)

Similar situation is observed in GOONIYANDI (McGregor 1990: 321–322) and in several other languages of the Kimberley region (McGregor 2004: 224–225).

GEORGIAN (Kartvelian, South Caucasus): a tense-aspect split. Both Nominative (42a) and Ergative (42b) As are cross-referenced by subject agreement markers, which in 3rd person are cumulative with tense; both Dative (42a) and Nominative (42b) Ps trigger zero agreement markers. Agreement with Recipients (consistently marked Dative) is expressed by a special set of prefixes.

- (42) a. *gogona*₁ *bebia-s*₂ *çign-s* *mi-s₂-c-em-s₁*¹⁵.
 girl(NOM) grandmother-DAT book-DAT PRV-3SG.IO-give-TH-3SG.SBJ
 ‘The girl is giving a book to the grandmother.’ (Nino Amiridze, p.c.)

¹⁴ Sequences of two dual enclitics are disallowed in Djaru, the second one is replaced by the corresponding plural (Tsunoda 1981: 133).

¹⁵ The homophony between the 3rd person IO prefix *s-/h-* and the Present 3Sg Subject suffix *-s* is accidental.

- b. *gogona-m₁* *bebia-s₂* *çign-i* *mi-s₂-c-a₁*.
 girl(ERG) grandmother-DAT book-NOM PRV-3SG.IO-give -AOR:3SG.SBJ
 ‘The girl gave a book to the grandmother.’

However, in the (evidential) Perfect the so called ‘inversion’ occurs (Harris 1981: Ch. 8), whereby A, P and R shift both their head- and dependent marking: A is marked Dative and triggers a special kind of indirect object agreement, P is marked Nominative and triggers subject agreement, and R is demoted to a non-cross-referenced postpositional oblique:

- c. *gogona-s₁* *çign-i₂* *bebi-is = tvis* *mi-u₁-c-i-a₂*.
 girl-DAT book-NOM grandmother-GEN=for PRV-3SG.IO+APPL-give-PRF-3SG.SBJ
 ‘The girl apparently gave a book to the grandmother.’

➤ Taking into account the data from Georgian, Djaru, Gooniyandi, Amharic, it is possible to generalize that in the languages with different agreement paradigms for different types of objects, the arguments lower on the obliqueness hierarchy tend to show more consistent alignment of head- and dependent-marking than the arguments higher on the hierarchy.

Languages of type C show a great diversity of many-to-many correspondences between case marking and verbal cross-referencing. Except for the “trivial” mismatches in transitive and ditransitive alignment well-known from the literature, it seems that in each language functions of flagging and indexing are distributed in a unique, though usually motivated way. Notably, as shows the comparison of Burushaski and Choctaw, duties done by case marking in one language may be attributed to agreement in another, and vice versa.

10. Cross-referencing of oblique participants

“[T]he likelihood of an argument displaying both overt case and agreement marking declines as we progress down the argument hierarchy”. (Bakker & Siewierska 2009: 302)

A number of counterexamples have already been discussed: Amharic, Ge’ez, Macedonian, Djaru, Manambu – and even more are found across languages. For a more systematic account and possible generalizations, see Arkadiev (2009) (in Russian!).

11. Conclusions

➤ Case is well attested in head-marking languages, even with the restrictions stated in section 2, moreover, head-marking languages tend to have rich case-systems.

➤ Three major types of case ~ agreement correspondence systems are found:

Type A: (almost) complementary distribution;

Type B: (almost) exact matching;

Type C: systematic mismatches and many-to-many correspondences.

➤ There are no strict boundaries between the types, and pure systems of types A and B are rare; rather, there is a cline from type A via type B to type C depending on the nature and scope of case ~ agreement mismatches attested in the individual languages.

➤ The fact that type C is by far the most common, as well as the frequency distribution of various minor or systematic one-way mismatches between flagging and indexing found in the languages of types A and B, can be attributed to inherent differences in functions of case and agreement (e.g. case is “better suited” for distinguishing between As and Ps as well as to marking peripheral semantic roles, whereas agreement is more sensitive to prominence relations between arguments).

- However, as the data clearly show, it is far too simplistic to assume that functions of head- and dependent-marking are cross-linguistically consistent: what may motivate the distribution of case in one language, in other will motivate agreement, and vice versa.
- Rather, languages tend to be organized in such a way that the interplay between head- and dependent-marking would be “optimal”, i.e. both systems partition the domain of participant-related semantics, where they complement and reinforce each other, often in intricate language-specific ways.

Abbreviations

A – agent, ABL – ablative, ABS – absolutive, ACC – accusative, ACT – active, ALL – allative, AOR – aorist, AP – antipassive, APPL – applicative, AUX – auxiliary, BEN – benefactive, CAUS – causative, CLF – classifier, COM – comitative, COMPL – completive, DAT – dative, DEF – definite, DEM – demonstrative, DET – determiner, DFV – definitive, DIR – direct case, DO – direct object, DU – dual, ERG – ergative, F – feminine, FOC – focus, FUT – future, HAB – habitual, IND – indicative, INDEF – indefinite, INS – instrumental (case/applicative), IO – indirect object, IRR – irrealis, ITR – intransitive, LOC – locative (case/applicative), M – masculine, N – neuter, NEG – negation, NOM – nominative, OBJ – object, OBL – oblique (case/object), P – patient, PART – participle, PASS – passive, PL – plural, POSS – possessive, PRED – predicative, PRF – perfect(ive), PROG – progressive, PRS – present, PRV – preverb, PST – past, REAL – realis, REC – recipient, REMPST – remote past, S – subject of intransitive verb, SBJ – subject, SG – singular, TH – ‘thematic’ suffix, TNS – tense, TOP – topic, TR – transitive

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