

Case-Marking Strategies

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Two strategies of case marking in natural languages are discussed. These are defined as two violable constraints whose effects are shown to converge in the case of differential object marking but diverge in the case of differential subject marking. The discourse prominence of the case-bearing arguments is shown to be of utmost importance for case-marking and voice alternations. The analysis of the case-marking patterns that are found crosslinguistically is couched in a bidirectional Optimality Theory analysis.

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28 29 **1 Introduction**

30 Transitive predicates come with a first (higher) and a second (lower) argument in their argument
31 structure. We will refer to these arguments quite loosely as the subject and the object, respectively,
32 but we are aware that the labels *subject* and *object* may not be appropriate in all contexts, depending
33 on how they are actually defined.

34 In many languages, ergative and accusative case are assigned only or mainly in transitive
35 sentences, while in intransitive sentences they are usually not assigned (Burzio 2000). In that
36 sense, we may call ergative and accusative “dependent” cases, following Marantz (1991), since
37 ergative and accusative crucially *depend on* the presence of another (core) argument (direct object
38 and subject, respectively) in the clause. Unlike nominative case, which is closely connected to
39 the grammatical function of subject and which can combine with different thematic roles, ergative
40 and accusative case are thematically more restricted in that they are mainly used for agents and
41 patients, respectively (a well-known exception is the assignment of accusative case in exceptional
42 case-marking constructions). This cannot be reversed, since agents of intransitive sentences do
43 not receive ergative case in many languages, nor do intransitive subjects that fulfill the role of
44 patient receive accusative usually (although exceptions exist, as will be exemplified below).

45 In Chomsky 1981 and subsequent work, a notion of abstract case (usually referred to as
46 *Case*) is used in connection with the inviolable Case Filter, which requires every lexically realized
47 DP to bear case. In languages that have little or no case morphology, lexically realized DPs
48 without case apparently violate the Case Filter. However, the postulation of abstract Case would
49 guarantee DPs in structural case positions to be saved from the Case Filter. In this article, we
50 take an Optimality Theory perspective (Prince and Smolensky 2004). Therefore, we assume that
51 linguistic constraints such as the Case Filter are violable in nature. Hence, we do not need the
52 notion of abstract Case. Some level of abstraction may still be needed, but in the absence of
53 explicit evidence we simply assume that “what you see is what you get.” Thus, we interpret the
54 absence of morphological case marking as the absence of case (Aissen 1999, 2003). This also
55 means that what is referred to as *nominative* case, or in other contexts *absolutive*, can sometimes
56 be viewed as the absence of case. This holds, for example, for the nominative case-marked subject
57 in Hindi in (1), but not for the nominative case-marked subject in Japanese in (2).

58 (1) Raam- \emptyset ek bakre-ko bectaa hae.
59 Ram-NOM one goat-ACC selling is
60 ‘Ram sells the goat.’

61 (2) Boku-ga tomodati-ni hana-o ageta.
62 1SG-NOM friend-DAT flowers-ACC gave
63 ‘I gave flowers to my friend.’

64 In (1), the name *Ram* is glossed as being in the nominative, even though there is no such thing
65 as a nominative marker in Hindi. That is, the proper noun in (1) is in its unmarked, uninflected
66 form. By contrast, there is a clear case marker, *-ko*, on the direct object in (1). The uninflected
67 word form is called nominative, but in fact, nominative case in Hindi can be viewed as the absence
68 of case. By contrast, the nominative case in Japanese is expressed by a real case marker, and
69 therefore we cannot equate nominative case with the absence of case in Japanese, unless the case
70 marker is dropped, as often happens in colloquial speech (Fry 2001, Lee 2002).

71 In ergative case systems, the absolutive case is often unmarked, and we will similarly assume
72 that in the absence of morphological case marking, absolutive case is in fact the absence of case
73 as well. This is illustrated in sentence (3) from Yup’ik.

74 (3) Angut-em tangrraa arnaq- \emptyset .
75 man-ERG sees woman-ABS
76 ‘The man sees the woman.’

77 A well-studied paradigm in the domain of case is differential object marking: in many languages,
78 objects higher in animacy or definiteness are case-marked, while lower ones are not (Bossong
79 1985, Aissen 2003). In Turkish, for example, specific objects are marked with accusative case,
80 while nonspecific objects remain caseless (Enç 1991).

81 (4) Ali bir kitab-ı aldı.
82 Ali one book-ACC bought
83 ‘Ali bought a certain book.’

84 (5) Ali bir kitap aldı.
85 Ali one book bought
86 ‘Ali bought some book or other.’

87 An explanation of differential object marking in terms of markedness is proposed by Aissen
88 (2003). In a canonical transitive construction, the object is lower than the subject in animacy/
89 definiteness. Thus, when the object is animate/definite, it is *marked* (for an object), which means
90 it should be (case-)marked as well. If differential subject marking mirrored differential object
91 marking, then we would also expect inanimate and indefinite subjects (which are more “ob-
92 jectlike” and hence *marked* for a subject) to be case-marked, rather than typical (animate, definite)
93 subjects. This prediction is actually borne out in some languages, such as Qiang (a Tibetan
94 language), where the subject in a transitive clause takes agentive case only when it is inanimate
95 (Lapolla 2003).

96 (6) MoVu-wu qa datuəZ.
97 wind-AGT 1SG knocked.down
98 ‘The wind knocked me down.’

99 In fact, though, such examples are rare. More often, differential subject marking manifests itself
100 in a split between nouns and pronouns or as a function of clausal features such as tense/aspect/
101 mood. Also, as shown in various contributions to de Hoop and de Swart 2008 show, sometimes
102 the pattern seems to be the opposite of the one in Qiang, such that case marking is required on
103 the typical (agentive, volitional) subjects rather than on the atypical ones. In general, while differ-
104 ential object marking is rather robust in that it is always the more prominent (animate, definite)
105 object that is case-marked, there is much more variation in the patterns of differential subject
106 marking found crosslinguistically (see Malchukov 2007, de Hoop and de Swart 2008). In this

107 article, we will account for this striking difference concerning the two types of case alternation,
108 differential object and subject marking.

109 Another generalization that we will account for, basically following Malchukov (2006), is
110 that passives are found mostly in nominative-accusative languages, while antipassives are found
111 mostly in ergative languages. We will argue that this is linked to another crosslinguistic observa-
112 tion, namely, that differential object marking is found mostly in nominative-accusative languages
113 while differential subject marking is found mostly in ergative languages. We will show that these
114 widely attested patterns can be explained in terms of an interplay among different types of universal
115 constraints in the domain of case marking.

116 2 Two Basic Functions of Case Marking

117 The main hypothesis we wish to explore in this article is that, following functional-typological
118 insights, two basic functions of case marking can be distinguished, the *identifying* function and
119 the *distinguishing* one (Mallinson and Blake 1981, Kibrik 1985, Comrie 1989, Song 2001).
120 Roughly, while the identifying function encodes internal properties of the arguments, the distin-
121 guishing function crucially depends on the relation between the arguments.

122 The identifying strategy makes use of case morphology to encode specific semantic/pragmatic
123 information about the nominal argument in question. We say that case morphology is used to
124 identify semantic or pragmatic properties. Lexical (inherent, oblique) as well as semantic cases
125 are obvious examples of the identifying strategy (Butt and King 2003, 2004), but the identifying
126 function of case is not restricted to lexical or semantic cases. In fact, structural or grammatical
127 cases identify some semantic/thematic properties to a certain degree as well. For example, struc-
128 tural accusative case in direct object position can be argued to identify patienthood. In some
129 languages, dative is a structural case as well, yet it is clearly associated with thematic roles such
130 as goal and experiencer. Ergative case is associated with “true” agents in many languages. In
131 Manipuri, for example, the ergative case on the agent in (7) marks high agentivity (the agent is
132 in control, volitional), while a decrease in agentivity is signaled by the lack of ergative case in
133 (8) (Bhat and Ningomba 1997).

134 (7) əy-nə tebəl-də theŋgi.
135 I-ERG table-LOC touched
136 ‘I touched the table (volitionally).’

137 (8) əy tebəl-də theŋgi.
138 I table-LOC touched
139 ‘I touched the table (involuntarily).’

140 In Manipuri, all and only true agents receive ergative case. This holds for both transitive and
141 intransitive agents. Thus, one can say that ergative case in Manipuri identifies agentivity. We
142 introduce a general constraint stating that ergative case identifies *strong subjects* (which we will
143 designate as *A*). The notion *strength* that is used in (9) will be elaborated on in section 3.

144 (9) IDENTIFY (*A/ERG*)
145 Ergative case identifies strong subjects ($A \leftrightarrow \text{ERG}$).

146 A more general constraint can be formulated as follows:

147 (10) IDENTIFY
148 Encode internal argument properties.

149 IDENTIFY must be conceived of as a family of constraints and not a single constraint. Clearly, the
150 constraint in (9) can be taken as one instantiation of this constraint.

151 The distinguishing strategy is a more specific strategy that is used for distinguishing between
152 the two core arguments of a transitive clause, that is, the subject and the object. The intuition
153 behind the distinguishing function is quite clear. When a two-place predicate $R(x,y)$ is used to
154 describe an event involving two participants, usually an agent and a patient, it is of utmost
155 importance to know which noun phrase corresponds to the first argument x (the agent) and which

156 to the second argument *y* (the patient). For this purpose, case can be used to mark one of the
 157 arguments. If one argument is case-marked, this already suffices for the purpose of disambiguation.
 158 Thus, from the distinguishing perspective, there is no need to case-mark both arguments. Neither
 159 would it be necessary to case-mark the one and only argument of a one-place (intransitive)
 160 predicate. Indeed, it has been argued that in many nominative-accusative case systems only the
 161 *y* is case-marked (with accusative case) while the *x* remains morphologically unmarked. This
 162 view accords with our assumption presented above. When nominative case is the unmarked
 163 (uninflected) case form, we interpret it as the absence of case. Similarly, in pure ergative-absolutive
 164 systems only the *x* is case-marked, while the *y* remains morphologically unmarked (absolutive).
 165 The single argument of an intransitive verb is unmarked as well, and although it is labeled
 166 absolutive or nominative, it can often be seen as lacking case as well.

167 While Manipuri is an example of a radically identifying language, there are also languages
 168 that can be characterized as radically distinguishing. In Awtuw, the object is obligatorily marked
 169 with accusative case if the object is as high as or higher than the subject in the animacy hierarchy
 170 (Feldman 1986).

171 (11) Tey tale-re yaw dæli.
 172 3FEM.SG woman-ACC pig bit
 173 ‘The pig bit the woman.’

174 (12) Tey tale yaw dæli.
 175 3FEM.SG woman pig bit
 176 ‘The woman bit the pig.’

177 In Fore, a Papuan language, it is the subject that is marked with ergative case if the object is
 178 higher in the animacy hierarchy than the subject (Scott 1978).

179 (13) Yagaa-wama wá aegúye.
 180 pig-ERG man hit
 181 ‘The pig hits the man.’

182 (14) Yagaa wá aegúye.
 183 pig man hit
 184 ‘The man hits (or kills) the pig.’

185 In (14), the man is higher in the animacy hierarchy than the pig, and that is why ‘man’ is interpreted
 186 as the subject, even though the canonical SOV word order is overruled. If two arguments are
 187 equal in the animacy hierarchy in Fore, word order becomes decisive and the first argument is
 188 interpreted as the subject. But if the speaker wants to express that the pig hit the man, then the
 189 nonhuman subject must be explicitly marked as the subject (as in (13)). Note, by the way, that
 190 ergative marking becomes dispensable if the arguments are disambiguated via verbal agreement.
 191 According to Foley (1986:173), this means that verbal (agreement) morphology takes priority
 192 over nominal (case) morphology as a means of disambiguation. Crosslinguistically, a merely
 193 distinguishing function of case is rare. This could be explained by the fact that there are alternative
 194 strategies for disambiguating the two arguments of a transitive predicate, such as the use of subject
 195 agreement, word order restrictions, context, and/or intonation (Keenan 1978, Bouchard 2001, de
 196 Hoop and Lamers 2006). For example, as noted above, when in Fore the two arguments are equal
 197 in animacy, word order alone determines what is the subject and what is the object: the first noun
 198 phrase is then interpreted as the subject.

199 The distinguishing function of case can be characterized as a global constraint as in Fore
 200 (i.e., the relative animacy of subject and object is measured) or as a local one as in classical cases
 201 of markedness effects in differential object marking, where for instance the animacy or definiteness
 202 of the object is evaluated independently of the animacy or definiteness of the subject (see de
 203 Swart 2006 for more discussion and more examples of global distinguishability). To put the
 204 general motivation behind this type of case marking, whether locally or globally applied, in terms
 205 of a constraint (de Swart 2006, de Hoop and Lamers 2006):

206
207

(15) *DISTINGUISHABILITY*

The two arguments of a transitive clause should be distinguishable.

208 Case marking is a way to distinguish between the subject and the object and hence to satisfy
209 *DISTINGUISHABILITY*. If the subject and the object are otherwise distinguishable (as when in Fore
210 the subject outranks the object in animacy), then case marking is not necessary to satisfy this
211 constraint. However, if the object is more “subjectlike” (absolutely or relatively)—that is, if it
212 equals the (general or actual) subject in animacy/definiteness—the subject and the object can no
213 longer be distinguished on the basis of these animacy/definiteness properties. In order to satisfy
214 *DISTINGUISHABILITY* and to avoid *potential* ambiguity, case marking can apply.

215 Obviously, the identifying and distinguishing functions are not entirely separate, but overlap
216 considerably. In fact, if case is systematically used to identify the subject or the object in a
217 transitive clause, then of course differentiation comes “for free.” Therefore, case systems that
218 are completely based on the function of identification must be richer in case morphology than
219 the mainly distinguishing ones. As we will show, however, both functions are needed to account
220 for the various case-marking patterns found across languages.

221 **3 A Bidirectional Optimality Theory Approach to Case Marking**

222 Crosslinguistically, the strength of nominal constituents seems to influence case marking (e.g.,
223 de Hoop 1996). As pointed out by de Hoop and Narasimhan (2005), arguments that are definite
224 and animate can be seen as stronger, as more prominent in the discourse, or as typical full-fledged
225 arguments, independent of whether they are the subject or the object of a transitive clause. This
226 is also clear in the account of Legendre, Raymond, and Smolensky (1993), who emphasize the
227 role of discourse prominence for case marking and use Optimality Theory (OT) constraints such
228 as “High-prominence arguments receive subject case marking” and “Low-prominence arguments
229 do not receive subject or object case marking.” Thematic properties contributing to agentivity
230 or patienthood of the core arguments also seem to contribute to an argument’s strength (Dowty
231 1991). Importantly, different perspectives on the strength of DPs point in the same direction:
232 animate and specific DPs are usually highly prominent in the discourse, and they are also often
233 realized as real syntactic arguments (hence qualify as better agents and patients). We will refer
234 to these DPs as *strong* DPs in the remainder of this article, basically following de Hoop and
235 Narasimhan (2005).

236 Note by the way that this notion of strength for arguments differs only slightly from the
237 notion of strength used in de Hoop 1996 to account for the role of DP semantics in (abstract)
238 differential case marking. De Hoop focuses on the difference between quantificational and predica-
239 tive types of noun phrases, and this difference can also be captured under the notion of strength
240 as we use it here. What counts as a strong DP—that is, the cut-off point between strong and
241 weak—may vary from language to language. Thus, we can define the identifying function of
242 case as identifying/markings the strong arguments, both subjects and objects. Thus, we predict
243 that strong DPs are likely to be overtly case-marked (de Hoop 1996). However, this does not
244 always hold. In fact, sometimes the weak rather than the strong arguments receive overt case
245 marking (see Aissen 1999). We claim that crosslinguistic variation in case-marking patterns can be
246 analyzed in terms of differences in the relative strengths of the two basic case-marking constraints,
247 *IDENTIFY* and *DISTINGUISHABILITY*, in relation to *ECONOMY*. In this section, we will present our
248 bidirectional OT analysis of the resulting case patterns.

249 Consider the pattern in Manipuri, repeated here for convenience. The ergative case on the
250 subject marks high agentivity, while a decrease in agentivity of the subject is signaled by the
251 lack of ergative case.

252 (16) əy-nə tebəl-də theŋgi.
253 I-ERG table-LOC touched
254 ‘I touched the table (volitionally).’

256 (17) əy tebəl-də theŋŋi.
 257 I table-LOC touched
 258 'I touched the table (involuntarily).'

259 (16) and (17) constitute a minimal pair of form-meaning pairs, where one form (ergative) corre-
 260 sponds to one meaning (the strong subject, which we will designate as *A*) and the other form
 261 (without case) to the other meaning (the weak subject, *a*).

262 A pattern like this with two related forms and two related meanings and a one-to-one mapping
 263 between the forms and the meanings suggests an analysis in terms of bidirectional OT (Blutner
 264 2000). The markedness principle that is a general principle in natural language states that an
 265 unmarked form goes with an unmarked meaning, and a marked form with a marked meaning
 266 (Horn 1984), and it is known to follow from bidirectional optimization (from form to meaning
 267 and from meaning to form). Let us briefly illustrate the main characteristics of Blutner's bidirec-
 268 tional OT (note that there are also other, asymmetrical, bidirectional OT models, such as the ones
 269 proposed by Wilson (2001) and Zeevat (2000)). Assume that we have two forms f_1 and f_2 and
 270 two meanings m_1 and m_2 . We stipulate that the form f_1 is less marked than the form f_2 , which
 271 means that for a given meaning m , form f_1 will be the optimal form. Furthermore, interpretation
 272 m_1 is less marked than interpretation m_2 , which means that for a given form f , meaning m_1 will
 273 be the optimal meaning (Blutner 2000, Dekker and van Rooij 2000).

274 In Blutner's (2000) framework, a form-meaning pair $\langle f, m \rangle$ is called *superoptimal* if and
 275 only if there is no other superoptimal pair $\langle f', m \rangle$ such that $\langle f', m \rangle$ is more harmonic than $\langle f, m \rangle$
 276 and there is no other superoptimal pair $\langle f, m' \rangle$ such that $\langle f, m' \rangle$ is more harmonic than $\langle f, m \rangle$.
 277 The reader may verify that according to this definition, and given the two forms f_1 and f_2 and
 278 the two meanings m_1 and m_2 , there are two superoptimal pairs, namely, $\langle f_1, m_1 \rangle$ and $\langle f_2, m_2 \rangle$.
 279 Indeed, although f_2 is not an optimal form itself and m_2 is not an optimal meaning, the pair
 280 $\langle f_2, m_2 \rangle$ is superoptimal, because there is no superoptimal pair that blocks it. A pair $\langle f, m \rangle$ is
 281 *blocked* if there is a superoptimal pair $\langle f', m \rangle$ or $\langle f, m' \rangle$ that is more harmonic than $\langle f, m \rangle$. So,
 282 the two candidates $\langle f_1, m_2 \rangle$ and $\langle f_2, m_1 \rangle$ are not superoptimal because they are each blocked by
 283 the superoptimal pair $\langle f_1, m_1 \rangle$. Now, because $\langle f_1, m_2 \rangle$ and $\langle f_2, m_1 \rangle$ are blocked, they are not
 284 superoptimal. As a consequence, these two pairs cannot block $\langle f_2, m_2 \rangle$, because a pair can only
 285 be blocked by a *superoptimal* pair that is more harmonic either in form or in meaning. Although
 286 $\langle f_1, m_2 \rangle$ and $\langle f_2, m_1 \rangle$ are more harmonic than $\langle f_2, m_2 \rangle$ in form or meaning, respectively, they are
 287 not superoptimal, so they cannot block the pair $\langle f_2, m_2 \rangle$. Thus, Blutner's bidirectional OT provides
 288 two superoptimal form-meaning pairs, one linking the unmarked form to the unmarked meaning,
 289 and one linking the marked form to the marked meaning. This is in accordance with the markedness
 290 principle.

291 Let us now turn to our bidirectional analysis of the Manipuri case-marking pattern. In Mani-
 292 puri, subject case marking is completely determined by IDENTIFY, so all and only strong subjects
 293 receive ergative case (Bhat and Ningomba 1997). We assume that a general constraint called
 294 ECONOMY penalizes morphological case marking. Thus, two superoptimal form-meaning pairs
 295 are derived for the subject as illustrated in tableau (18).

308 (18) Asymmetrical differential subject case marking in Manipuri
 309

Subject	IDENTIFY (A/ERG)	ECONOMY
315 323 326 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 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352 (ergative case) is less economical (suboptimal); the third pair has the same form as the fourth,
 353 but it is linked to a less harmonic meaning (as it induces a violation of IDENTIFY). Therefore, the
 354 second and third form-meaning pairs are blocked by the fourth pair. The first pair cannot be
 355 blocked by the superoptimal pair, since it differs in both form *and* meaning from that one. Hence,
 356 it is not blocked by a superoptimal pair at all (as the other two candidates are not superoptimal
 357 themselves). That is why the first candidate emerges as superoptimal as well. As a result, there
 358 are two winning form-meaning pairs, one that assigns no case to a weak subject, and another that
 359 assigns ergative case to a strong subject. In de Hoop and Malchukov 2007, we argue that in
 360 particular for this type of (fluid) case alternation, a bidirectional OT approach can straightforwardly
 361 account for the data while a unidirectional OT approach cannot.

362 Above, we presented Fore as a language where DISTINGUISHABILITY rather than IDENTIFY
 363 governs differential subject marking. The relevant pattern is repeated here.

364 (19) Yagaa-wama wá aegúye.
 365 pig-ERG man hit
 366 ‘The pig hits the man.’

367 (20) Yagaa wá aegúye.
 368 pig man hit
 369 ‘The man hits (or kills) the pig.’

370 In Fore, the subject receives ergative case marking when it is (relatively) weak, in the sense that
 371 it is less prominent than the object (i.e., the object outranks the subject in the animacy hierarchy).
 372 To distinguish this weak subject from the object, the weak subject is case-marked. Hence, when
 373 the subject is relatively strong (as animate as or more animate than the object), it remains without
 374 case. This is illustrated in the bidirectional OT tableau (21).

380 (21) Asymmetrical differential subject case marking in Fore
 389

Subject	DISTINGUISHABILITY	ECONOMY
[ERG, A]		*
ɔ̃ [ERG, a]		*
ɔ̃ [∅, A]		
[∅, a]	*	

427 The third candidate form-meaning pair is clearly a superoptimal pair, as it does not violate any
 428 of the constraints. In this candidate pair, the subject outranks the object in animacy (hence is
 429 marked A for ‘‘strong subject’’), which means that DISTINGUISHABILITY is satisfied, and there is
 430 no case marking, which means that ECONOMY is satisfied as well. Hence, the third pair blocks
 431 both pairs that differ from the superoptimal pair in either form (the first candidate) or meaning
 432 (the fourth candidate). This leaves the second candidate, which differs from the third one in both
 433 form and meaning, as the second superoptimal form-meaning pair.

434 We have now illustrated how our proposal accounts for differential case-marking patterns on
 435 the basis of IDENTIFY and DISTINGUISHABILITY, both in relation to a general principle of ECONOMY.
 436 Strikingly, whereas IDENTIFY in relation to ECONOMY results in ergative case marking of the *strong*
 437 subject, DISTINGUISHABILITY in relation to ECONOMY results in ergative case marking of the *weak*
 438 subject. This explains the variation in differential subject-marking patterns that is found crosslingu-
 439 istically (Malchukov 2007, de Hoop and de Swart 2008).

440 Another phenomenon worth discussing here is *symmetrical* differential case marking, where
 441 two case forms alternate rather than one case-marked form alternating with a caseless form.
 442 Relevant examples from Lexgian are given in (22) and (23) (Haspelmath 1993).

443 (22) Ajal-di get’e xana.
 444 child-ERG pot broke
 446 ‘The child broke the pot.’

447 (23) Zamiira.di-waj get'e xana.
 448 Zamira-OBL pot broke
 449 'Zamira broke the pot (accidentally/involuntarily).'

450 These examples instantiate differential subject marking that reflects features of the subject (in
 451 particular, volitionality vs. nonvolitionality). Both the weak subject and the strong subject are
 452 case-marked, so neither remains caseless. So far, we have discussed varieties of *asymmetrical*
 453 differential case marking, where one form is case-marked and the other is the unmarked or null
 454 form (shown by the absence of case marking), which can be analyzed as the result of the interaction
 455 between DISTINGUISHABILITY and ECONOMY (Aissen 1999, 2003). However, in cases of symmetrical
 456 differential case marking of the type observed in Lezgian, DISTINGUISHABILITY would be
 457 vacuously satisfied as the appearance of both ergative and oblique case on the subject suffices
 458 to distinguish between the subject and the object. Hence, whenever symmetrical case alternations
 459 occur (i.e., two types of morphological case) instead of asymmetrical ones (overt case marking
 460 vs. no case marking), we suggest an analysis in terms of IDENTIFY. This pattern can be accounted
 461 for straightforwardly in a bidirectional OT approach as well. In Lezgian, ergative case switches
 462 to oblique if the subject is weak (in this case, nonvolitional), producing the pattern shown in (24).

469 (24) Symmetrical differential subject case marking in Lezgian

Subject	IDENTIFY (A/ERG)	ECONOMY
☞ [ERG, A]		*
[ERG, a]	*	*
[OBL, A]	*	*
☞ [OBL, a]		*

518 Note that ECONOMY is violated by all candidate pairs in Lezgian. This can be accounted for if
 519 we assume a general constraint such as the CASE FILTER, which requires case marking on all DPs
 520 and which apparently outranks ECONOMY here.

521 Things are different for asymmetrical differential case marking, which is often triggered by
 522 DISTINGUISHABILITY. This is illustrated by the well-known pattern of differential case marking
 523 where different types of nominal constituents select different cases; for example, nouns are marked
 524 differently from pronouns in Australian split-ergative languages. In many split-ergative languages,
 525 a (first/second person) pronoun does not receive ergative case marking when it is the subject of
 526 a transitive verb, while a noun does (Silverstein 1976, Aissen 1999). By contrast, (first/second
 527 person) pronominal direct objects receive accusative case marking, while nominal objects do not.
 528 A well-known example of this pattern is Dyirbal (Dixon 1979).

539 (25) Case marking in Dyirbal

	1st, 2nd person pronoun	3rd person pronoun	Noun
543 Transitive subject	∅	-ŋgu	-ŋgu
549 Transitive object	-na	∅	∅

555 This type of differential case marking is due to DISTINGUISHABILITY, interacting with ECONOMY.
 556 It is illustrated in tableau (26) for differential subject marking in Dyirbal.

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606

(26) Asymmetrical differential subject case marking in Dyirbal

Subject	DISTINGUISHABILITY	ECONOMY
[ERG, A]		*
♯ [ERG, a]		*
♯ [Ø, A]		
[Ø, a]	*	

609 In Dyirbal, first and second person pronouns count as strong subjects (As), and they do not need
610 case marking to distinguish them from objects. This is in accordance with the fact that the same
611 categories (i.e., first and second person pronouns) count as strong objects (Ps) and therefore
612 receive accusative case marking when they function as object of a transitive clause. The same
613 correlation between case-marking strategies and differential case-marking patterns (symmetrical
614 vs. asymmetrical) observed above for differential subject marking can be observed for differential
615 object marking too. That is, in a split-ergative language like Dyirbal, differential case marking
616 of the object is asymmetrical and clearly due to DISTINGUISHABILITY.

617 On the other hand, symmetrical differential object marking must be due to IDENTIFY. Differen-
618 tial object marking in Finnish illustrates this analysis. In Finnish, weak objects receive partitive
619 case and strong objects, accusative case. A strong object is obtained when the predicate is bounded
620 (i.e., nonhomogeneous) (Kiparsky 1998).

621 (27) Ammuin karhu-a.
622 shot.1SG bear-PART
623 'I shot at a/the bear.'

624 (28) Ammuin karhu-t.
625 shot.1SG bear-ACC
626 'I shot a/the bear.'

627 In Finnish, then, IDENTIFY does the job all by itself. Note that ECONOMY is vacuously violated
628 here, which means that both candidate forms (and therefore, all four form-meaning pairs) violate
629 this constraint. And again, DISTINGUISHABILITY would be vacuously satisfied, as either accusative
630 or partitive case would suffice to distinguish the object from the subject.

631 (29) Symmetrical differential object case marking in Finnish

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Object	IDENTIFY (P/ACC)	ECONOMY
♯ [ACC, P]		*
[ACC, p]	*	*
[PART, P]	*	*
♯ [PART, p]		*

686 So, while asymmetrical differential case marking can sometimes be explained by DISTINGUISHABIL-
687 ITY, symmetrical differential case marking is necessarily due to IDENTIFY. This is consistent with
688 Woolford's (2008) observation that differential case-marking patterns are heterogeneous and that
689 some are determined by an alternation in argument structure, although Woolford does not relate
690 the semantic types of differential case marking to the syntactic patterns in the way suggested
691 here. We believe that the two different strategies of case marking straightforwardly explain the
692 attested correlations.

693 Unlike in differential subject marking, in asymmetrical differential object marking the effects
694 of IDENTIFY and DISTINGUISHABILITY converge, because they both require the case marking of
695 strong (rather than weak) objects. This explains the crosslinguistic consistency of differential
696 object-marking patterns as compared with differential subject-marking patterns. (This has also
697 been pointed out by de Hoop and Narasimhan (2005)). To illustrate this, we will briefly discuss

836 global distinguishability. The difference between the two Papuan languages is that Fore has
 837 differential subject marking, while Awtuw has differential object marking. In Awtuw, the object
 838 is marked with accusative case if it outranks the subject in animacy. Note that we are dealing
 839 with global (relative) differential object marking here, in the sense that the object marking crucially
 840 depends on the properties of both the subject and the object—that is, the relation between the
 841 two. Such a pattern must be due to DISTINGUISHABILITY. In tableau (35), the strong object marker
 842 *P* stands for an object that outranks the subject in animacy.

849 (35) Asymmetrical differential object case marking in Awtuw
 850

Object	DISTINGUISHABILITY	ECONOMY
862 869 872 876 ǃ [ACC, P]		*
880 882 [ACC, p]		*
888 890 [∅, P]	*	
893 ǃ [∅, p]		

895 However, DISTINGUISHABILITY is not the best explanation for the differential object marking
 896 pattern in Central Pomo, where patientive case is locally (i.e., independent of the case of the
 897 subject) assigned to human objects only (Mithun 1991).

898 (36) M'u-tu ʔa-hk'úm.

899 he.PAT I.killed
 900 'I killed him.'

901 (37) Mu-l ʔa-hk'úm.

902 he I.killed
 903 'I killed it (the bee).'

904 This usual differential object-marking pattern could be explained by DISTINGUISHABILITY. Strik-
 905 ingly, though, the pattern carries over to differential subject marking.

906 (38) Q'alá-w m'u-tu.

907 died he.PAT
 908 'He died.'

909 In (38), the subject of the intransitive clause is a patient, and since it is human, it receives the
 910 same case marking as the object of the transitive clause in (36). This can only be explained by
 911 IDENTIFY, as it is a strong P-argument that gets marked, but in an intransitive clause, thus in the
 912 absence of another argument (Malchukov 2007). Hence, the case marking in (38) cannot be
 913 explained by DISTINGUISHABILITY. Therefore, the differential object-marking pattern in this lan-
 914 guage is also better explained by IDENTIFY, as illustrated in tableau (39).

920 (39) Asymmetrical differential object case marking in Central Pomo
 921

Object	IDENTIFY (P/PAT)	ECONOMY
933 934 943 948 ǃ [PAT, P]		*
953 956 [PAT, p]	*	*
960 963 [∅, P]	*	
966 ǃ [∅, p]		

968 To sum up, taking into account two functions of case marking, DISTINGUISHABILITY and
 969 IDENTIFY, we can explain the asymmetries between differential subject marking and differential
 970 object marking. While the two constraints give rise to the same type of differential object marking
 971 (marking the strong object), they diverge in the case of differential subject marking (DISTINGUISH-
 972 ABILITY predicts that the weak subject will be case-marked in order to distinguish it from the
 973 object, while IDENTIFY predicts that the strong subject will be case-marked). But even in the case

974 of differential object marking, we can find examples that seem to be triggered by the need to
 975 satisfy DISTINGUISHABILITY, as illustrated by (33) and (34) from Awtuw, as well as examples
 976 where the key constraint seems to be IDENTIFY, as shown by the paradigm in (36)–(38) from
 977 Central Pomo.

978 Our approach can also account for violations of Silverstein’s hierarchy constraints on case
 979 patterns, such as the use of ergative case in Aranda (Silverstein 1976, discussed in Woolford
 980 2008). In Aranda, both first person pronouns (strongest in the person hierarchy) and inanimate
 981 nouns (weakest in the animacy hierarchy) are surprisingly assigned ergative case.

982 (40) *ERG: 1st > 2nd > 3rd > human > animate > inanimate*

983 This pattern results from the fact that both IDENTIFY and DISTINGUISHABILITY interact with the
 984 animacy hierarchy (Silverstein 1976, Aissen 2003), but interact in the opposite way. Recall that
 985 DISTINGUISHABILITY compels differential case marking on the weakest (inanimate) subjects. Hence,
 986 the constraint penalizing inanimate subjects unmarked for ergative case is the strongest, and the
 987 marking of inanimate subjects in Aranda results from the fact that this constraint is stronger than
 988 ECONOMY considerations, which penalize morphological case, while other segments of the animacy
 989 hierarchy are dominated by the economy constraints. On the other hand, IDENTIFY penalizes case
 990 marking of subjects lower in the animacy hierarchy: only the strongest subjects (i.e., the first
 991 person pronouns) are identified/marked with ergative case. Hence, this constraint outranks the
 992 ECONOMY constraint as well. Thus, the effects of both IDENTIFY and DISTINGUISHABILITY are visible
 993 in Aranda: the ergative case on the first person pronoun (strong subject) is due to IDENTIFY, while
 994 the ergative case on the inanimate noun (weak subject) satisfies DISTINGUISHABILITY. The other
 995 types of subjects hold an intermediate position between weak and strong, and we will designate
 996 them as *A-a* (in this representation, we abstract away from the fact that this is not a unitary type,
 997 as it relates to different positions in the animacy hierarchy).

1005 (41) Asymmetrical differential subject case marking in Aranda

Subject	DISTINGUISHABILITY	IDENTIFY (A/ERG)	ECONOMY
1031 1033 † [ERG, A]			*
1039 1041 [ERG, A-a]		*	*
1043 1045 † [ERG, a]		*	*
1051 1053 [∅, A]		*	
1059 1061 † [∅, A-a]			
1065 1067 [∅, a]	*		

1070 The fifth candidate form-meaning pair in tableau (41), which combines no case with an intermedi-
 1071 ate subject (not strong, not weak), emerges as superoptimal. This candidate blocks the ones that
 1072 differ from it only in form or in meaning. However, the first and third candidate pairs differ both
 1073 in form *and* in meaning from the superoptimal pair. Hence, they emerge as superoptimal as well.
 1074 One might think that the third candidate pair would be blocked by the first one, since these two
 1075 differ only in meaning, not in form. However, this is not the case. First, there is no other case
 1076 form available; hence, there is no other form for the other meaning (the weak, inanimate subject)
 1077 and we may expect ambiguity. More importantly, though, a difference in form is not really
 1078 necessary here, because the first person pronoun (a strong subject) can never be inanimate (a
 1079 weak subject) at the same time. That is, ergative case is not ambiguous here between marking a
 1080 strong subject and marking a weak subject.

1081 4 The Relation between Case and Voice Alternations

1082 So far, we have worked with a very general economy constraint (simply called ECONOMY in the
 1083 OT tableaux) that interacted with our two basic case-marking constraints, DISTINGUISHABILITY
 1084 and IDENTIFY. To account for a few more crosslinguistic generalizations in the domain of case

1085 marking, we need to refine this constraint. That is, we will replace ECONOMY with Malchukov’s
1086 (2006) constraint PAIP, whose name originally abbreviated *Primary Actant Immunity Principle*.
1087 The *primary actant* (or *primary term* in Palmer’s (1994) terminology) refers to the argument of
1088 a transitive clause that is encoded like the intransitive subject. In our formulation, PAIP penalizes
1089 case-marking an (otherwise) unmarked argument. Thus, in general, PAIP penalizes morphological
1090 case marking of the absolutive argument in ergative languages and of the nominative argument
1091 in nominative-accusative languages. Of course, this can be seen as a reformulation of a constraint
1092 stating that one argument should always bear the unmarked case—or, to put it differently, that
1093 the unmarked case (either nominative or absolutive) is obligatorily present in every sentence of
1094 a language. This constraint thus resembles Tsunoda’s (1981) Unmarked Case Constraint and
1095 Bobaljik’s (1993) Obligatory Case Parameter.

1096 (42) *PAIP*
1097 Avoid (case) marking of the unmarked argument.

1098 PAIP thus penalizes “marking the unmarked.” As Malchukov (2006) has argued, the potential
1099 conflict between IDENTIFY and PAIP can explain the striking fact that differential object marking
1100 is normally found in nominative-accusative languages, while differential subject marking is usually
1101 found in ergative languages (Bossong 1985, Drossard 1991).

1102 In nominative-accusative languages, where the subject of a transitive sentence is the un-
1103 marked argument, differential object marking does not violate PAIP, which is satisfied by the
1104 nominative subject. But in ergative languages, where the object of a transitive verb is the unmarked
1105 argument, object marking would induce a violation of PAIP. In those languages, a weak object
1106 often leads to the use of an antipassive construction, while a strong object remains in the unmarked
1107 (absolutive) case. For example, consider the alternation between (43) and (44) in Greenlandic
1108 Eskimo (Bittner 1988).

1109 (43) Jaaku-p arnaq tuqut-p-aa.
1110 Jacob-ERG woman kill-IND-3SG.ERG/3SG.NOM
1111 ‘Jacob killed the woman.’

1112 (44) Jaaku arna-mik tuqut-si-v-uq.
1113 Jacob woman-INSTR kill-AP-IND-3SG.NOM
1114 ‘Jacob killed a woman.’

1115 Note that in (44) the object or the *y* argument is nonspecific, whereas it is specific in (43). Yet
1116 only (43) is a true transitive construction with ergative case on the subject and both subject and
1117 object agreement on the verb; (44) is in fact an intransitive—more specifically, antipassive—
1118 construction, and its only true argument (the subject) is therefore unmarked for case, whereas the
1119 *y* argument is marked with oblique (instrumental) case.

1120 Note that marking of the weak objects in an antipassive construction might appear problematic
1121 since the constraints DISTINGUISHABILITY and IDENTIFY both predict preferential marking of strong
1122 objects. The contradiction is only apparent, though. As noted above, in ergative languages the
1123 constraint IDENTIFY (P/ACC) cannot be satisfied because these languages lack accusative case.
1124 Hence, the strong object in a canonical transitive construction will remain unmarked. However,
1125 a weaker version of IDENTIFY, requiring differential marking of weak and strong objects, can be
1126 satisfied indirectly, through marking the weak object with an oblique case—that is, differently
1127 from strong objects. In this article, we have dealt primarily with core cases and have used the
1128 version of IDENTIFY pertaining to strong objects. Explaining why the weak object receives instru-
1129 mental case here is beyond the scope of the article, but we assume that assignment of oblique
1130 cases is also governed by faithfulness constraints such as IDENTIFY. Recall that in section 2 we
1131 mentioned that lexical (inherent, oblique) as well as semantic cases are obvious examples of the
1132 identifying strategy. However, for our current line of argument it is only important that IDENTIFY-
1133 P is satisfied here, even though indirectly (in the negative way). Below, we will provide more
1134 examples showing how a weaker version of IDENTIFY interacting with ECONOMY can explain some
1135 unusual patterns of differential case marking.

1136 In other words, weak objects may cause the shift to antipassive in ergative languages. This
1137 can be explained as the avoidance of a PAIP violation. Marking the alternation on the (absolute)
1138 object would violate PAIP, which states that the unmarked argument should not be tampered with.
1139 Using the antipassive construction causes the subject to become the unmarked argument (in the
1140 absolute case), which means that PAIP as a requirement that the clause must have an unmarked
1141 argument is fulfilled.

1142 Evidence for PAIP is found in nominative-accusative languages as well. In ergative languages,
1143 a change in the strength of the subject can affect the form of the subject exclusively (differential
1144 subject marking), since this does not violate PAIP. In nominative-accusative languages, on the
1145 other hand, a weak agent subject regularly leads to passivization. Thus, passivization applies
1146 when the subject is indefinite, nonspecific, or not important in the discourse. Similarly, in some
1147 languages passive forms are used to indicate nonvolitionality on the part of the subject (see Masica
1148 1991 on Sinhala and Dhivehi). In ergative languages, on the other hand, a nonvolitional subject
1149 may lead to a differential subject-marking pattern, as observed above. Thus, features that trigger
1150 differential subject marking in ergative languages may cause the use of a passive construction in
1151 nominative-accusative languages. Again, this can be straightforwardly explained by PAIP. Marking
1152 a change in meaning on the (nominative) subject of a transitive clause would violate PAIP, which
1153 states that the unmarked argument should not be marked. Using the passive construction causes
1154 the object to be promoted to the function of subject and hence to become the unmarked argument
1155 (in the nominative case), thus satisfying PAIP.

1156 As is expected if PAIP is a violable constraint, it may be violated as well in certain circum-
1157 stances. A case where PAIP is violated comes from Warlpiri (Hale 1973).

1158 (45) Njuntulu-lu npa-tju ŋatju.
1159 2SG-ERG 2SG-1SG speared.1SG
1160 ‘You speared me.’

1161 (46) Njuntulu-lu npa-tju-la ŋatju-ku.
1162 2SG-ERG 2SG-1SG-LA speared.1SG-DAT
1163 ‘You speared at me.’ ‘You tried to spear me.’

1164 In (45), the object is in the unmarked case, the absolute, while the subject is in the ergative
1165 case. In (46), however, we assume that the object ‘me’ is weak, as the action is attempted but
1166 not necessarily accomplished, and this weakness is marked by dative case on the object. In other
1167 ergative languages, as shown in (44), a weak object may result in the use of an antipassive
1168 construction. In Warlpiri, however, the construction in (46) is not an antipassive construction,
1169 because the subject retains ergative case and there is no antipassive morphology on the predicate
1170 either. So, both arguments of the transitive clause are actually case-marked in (46) and this means
1171 that PAIP is indeed violated. We can argue that in examples such as (46) IDENTIFY and PAIP again
1172 conflict, but IDENTIFY outranks PAIP.

1173 To sum up, we have presented harmonic cases where IDENTIFY and PAIP reinforce each
1174 other—that is, both constraints can be satisfied in case of differential object marking in nomina-
1175 tive-accusative languages and differential subject marking in ergative languages. When the two
1176 constraints are in conflict, a voice alternation is a common way to resolve it. As predicted,
1177 passivization applies when a subject alternation must be encoded in a nominative-accusative
1178 language, while antipassivization applies when an object alternation must be encoded in an ergative
1179 language (Malchukov 2006). This is also observed by Legendre, Raymond, and Smolensky (1993),
1180 who argue that passives occur when the input is *aP* (with a weak subject), while antipassives
1181 occur when the input is *Ap* (with a weak object). However, Legendre, Raymond, and Smolensky
1182 do not account for the fact that passives are found more often in nominative-accusative languages,
1183 while antipassives are found more often in ergative languages. In our approach, this is straightfor-
1184 wardly explained by the interaction between two conflicting constraints, as an attempt to satisfy
1185 PAIP.

1186 There are exceptions to this general picture, however, as already discussed by Malchukov
1187 (2006). For example, sometimes ergative languages seem to disfavor differential subject marking

1188 because the transitive subject and the verb agree. In Inuit, where the verb agrees with both the
 1189 subject and the object, it can be argued that not only the (absolute) object but also the ergative
 1190 subject have properties that are attributed to the “primary” (unmarked) argument referred to by
 1191 PAIP. Malchukov argues that for this reason, Inuit disfavors differential subject marking and turns
 1192 to the use of a passive construction instead, although passive formation is otherwise typical of
 1193 nominative-accusative languages. Similarly, one can argue that when the verb agrees with the
 1194 object in a nominative-accusative language, the object has properties associated with the “pri-
 1195 mary” unmarked argument, and therefore this language may resist differential object marking
 1196 and turn to the use of an antipassive instead, a voice that is otherwise almost exclusively found
 1197 with ergative languages. The latter view is consistent with Nichols’s (1992:158) observation that
 1198 not only ergative languages but also “those accusative languages in which there is agreement
 1199 with the O [object]” have antipassives. Another complication is presented by languages that show
 1200 multiple agreement (with both the subject and the object). For more discussion of these issues,
 1201 see Malchukov 2006.

1202 Also, related to the previous discussion, we have shown that in Warlpiri, PAIP is clearly
 1203 violated, as it is outranked by IDENTIFY. Note that Warlpiri is known as a “surface ergative”
 1204 language, which displays hardly any ergative features apart from case marking (e.g., the agreement
 1205 system functions on a nominative-accusative basis). Thus, for this language the status of the object
 1206 as the “primary,” unmarked argument is questionable. Basically, each of the two arguments is
 1207 unmarked in its own way, the subject of the transitive sentence being unmarked in terms of
 1208 agreement, and the object being unmarked in terms of case. Hindi is another example of a language
 1209 where PAIP is clearly ranked lower than IDENTIFY. Hindi shows both differential subject marking
 1210 (based on a split between perfective and imperfective tenses) and differential object marking
 1211 (based on the features animacy and specificity of the object). The two case-marking alternations
 1212 are for the most part independent of each other in Hindi, which means that both arguments can
 1213 be “unmarked,” but which also means that both arguments can be case-marked, as illustrated
 1214 by the ergative-accusative pattern in (47).

1215 (47) Us-ne ek laD.ke-ko dekhaa.
 1216 he-ERG one boy-ACC saw
 1217 ‘He saw the boy.’

1218 Thus, PAIP is ranked low in Hindi (see de Hoop and Narasimhan 2005), and this might be related
 1219 to the fact that it is hard to identify one argument as the “primary” or unmarked argument. In
 1220 Kashmiri, which also has differential subject and object marking, animate objects are *not* marked
 1221 in perfective contexts, that is, when ergative case is assigned to the subject (Klaiman 1987). In
 1222 (48), with an imperfective verb, the first person pronominal object receives accusative case; in
 1223 (49), with a perfective verb, it remains caseless (Wali and Koul 1997).

1224 (48) Su chu me parina:va:n.
 1225 he is 1SG.ACC teaching
 1226 ‘He is teaching me.’

1227 (49) Nana-n roTus bi.
 1228 Nana-ERG caught 1SG
 1229 ‘Nana caught me.’

1230 This means that PAIP is ranked higher in Kashmiri than in Hindi, and so in Kashmiri one argument
 1231 must remain unmarked (if not the subject, then the object).

1232 A final puzzle arises in certain cases where an A-feature is marked on the object, or where
 1233 a P-feature is marked on the subject, to satisfy PAIP. These cases are discussed more extensively
 1234 in Malchukov 2006. One example is the following Russian construction, where nonvolitionality
 1235 of the subject is marked by instrumental case on the object.

1236 (50) On krutil rulj.
 1237 he rotated wheel-ACC
 1238 ‘He rotated the wheel (consciously).’

1239 (51) On krutíl ruljom.
1240 he rotated wheel-INSTR
1241 ‘He rotated the wheel unconsciously.’

1242 In this example, it seems that IDENTIFY is violated in order to satisfy PAIP. IDENTIFY would require
1243 marking (non)volitionality on the subject. But in Russian, which is a nominative-accusative lan-
1244 guage, nonvolitionality of the subject is encoded on the object in order to leave the unmarked
1245 nominative subject unmarked. Therefore, one could argue that PAIP outranks IDENTIFY. In fact,
1246 however, IDENTIFY is not really violated here. The alternation between a weak and a strong subject
1247 *is* identified by case after all, albeit a case alternation on the object. Malchukov (2006) presents
1248 more examples of the same sort and argues that in these cases, IDENTIFY is satisfied after all, even
1249 by the marking of the “wrong” argument (in this case, the object is marked to express a feature
1250 of the subject). We assume that in these cases PAIP outranks a specific constraint such as IDENTIFY
1251 (A/ERG), which universally outranks a more general version of IDENTIFY (Woolford 2001). While
1252 satisfaction of PAIP in the Russian construction necessarily implies violation of the specific con-
1253 straint IDENTIFY (A/ERG), the more general version of IDENTIFY can still be satisfied by case-
1254 marking the relevant feature (volitionality of the subject) on the wrong argument (the object).

1255 To sum up, we have shown that the attested case and voice correlations in different types
1256 of languages can generally be analyzed as resulting from the interplay between two violable
1257 constraints, IDENTIFY and PAIP.

1258 5 Conclusions

1259 We have distinguished two main strategies of case marking, DISTINGUISHABILITY and IDENTIFY,
1260 and argued that they both play a role in the languages of the world. DISTINGUISHABILITY requires
1261 case marking to *disambiguate*, that is, to distinguish between the arguments of a transitive clause.
1262 IDENTIFY is a strategy that requires case marking to *identify* specific semantic-pragmatic informa-
1263 tion. In this article, we have investigated the two strategies of case marking and analyzed them
1264 as violable constraints. We have shown that they converge in the domain of differential object
1265 marking, whereas they diverge in the domain of differential subject marking. We have analyzed
1266 these patterns within a bidirectional OT approach, which we believe can handle more types of
1267 attested case alternations than a unidirectional OT syntactic account (see de Hoop and Malchukov
1268 2007). We have also argued that while asymmetrical differential case marking can sometimes be
1269 explained by DISTINGUISHABILITY, symmetrical differential case marking must always be due to
1270 IDENTIFY. The variety of patterns found across languages is predicted on the basis of these two
1271 case-marking constraints in relation to a principle of ECONOMY. Finally, following Malchukov
1272 (2006), we have argued that it is not a coincidence that antipassive constructions and differential
1273 subject marking are found mostly in ergative languages, while passive formation and differential
1274 object marking are found mostly in nominative-accusative languages. This is due to the interaction
1275 of IDENTIFY and an economy constraint, PAIP, that penalizes marking of the “unmarked” argument
1276 (*the “unmarked” argument* refers to the nominative argument in nominative-accusative languages
1277 and the absolutive argument in ergative languages). In general, we hope to have shown that it is
1278 worth taking a surface phenomenon such as the presence or absence of morphological case seri-
1279 ously, as it has deep repercussions in grammar.

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