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Case and Licensing

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It is fairly well understood that noun phrases (or DPs) occupy argument positions in sentences (or bear grammatical relations or functions) by virtue of the semantic roles they bear with respect to predicates. Current Principles and Parameters theories, following Chomsky (1981), add an additional condition on licensing NP (DP) arguments: they must also be assigned (abstract) Case. Recent investigations of languages with rich morphological case and agreement systems strongly indicate that the relationship between abstract Case and morphological case and agreement is indirect, at best. In this paper, I argue that the proper treatment of morphological case necessitates a complete break between abstract Case and morphological case. I show that the facts covered by "Burzio's generalization" (Burzio 1986) split into two sets explained by independently motivated principles. One set is covered by the "Extended Projection Principle" (see, e.g., Chomsky 1986: 4), in particular the requirement that sentences have subjects. The remainder is handled by the correct universal characterization of "accusative" and "ergative" morphological case, a characterization that also successfully explains a peculiar fact about the distribution of ergative case. Giving content to the theory of morphological case allows for the elimination of abstract Case theory from the theory of syntax. The mapping between semantic roles and argument positions, augmented by the subject requirement of the Extended Projection Principle, is sufficient to license NPs in argument positions.

1. Ergative case and Burzio's generalization

The examples in (1)–(3) illustrate an interesting feature of what's called ergative case in many languages — here I draw on Georgian (Harris 1981; Aronson 1982). In present, future, and other "Series I" tenses,[1] Georgian shows nominative case

on the subject and dative case on the object (in Georgian, dative and accusative morphological case have fallen together into what's called the dative case) — see (1a, c). However, in the aorist or simple past ("Series II"), we find ergative case on the subject and nominative case on the object. This is true for regular (Class 3) intransitive verbs — unergative in Relational Grammar terms — as in (1b) and for transitive (Class 1) verbs as in (1d). The contrast in the case-marking patterns between the Series I INFL in (1a, c) and the aorist from Series II in (1b, d) should be clear: only the aorist yields ergative case on the subject NP (and nominative case on the object of a transitive verb).

(1) a. *vano [pikr-ob]-s marikaze.*
Vano-NOM [think$_3$]-INFL$_{\text{I}}$ Marika-on
'Vano is thinking about Marika.'

b. *vano-m [i-pikr]-a marikaze.*
Vano-ERG [think$_3$]-INFL$_{\text{II}}$ Marika-on
'Vano thought about Marika.'

c. *nino gia-s surateb-s [a-čven-eb]-s.*
Nino-NOM Gia-DAT pictures-DAT [show$_1$]-INFL$_{\text{I}}$
'Nino is showing pictures to Gia.'

d. *nino-m gia-s surateb-i [a-čven]-a*
Nino-ERG Gia-DAT pictures-NOM [show$_1$]-INFL$_{\text{II}}$
'Nino showed the pictures to Gia.'

The examples in (2) illustrate what happens when we put unaccusative (Class 2) verbs in the aorist; these verbs, like passives, have syntactically derived subjects. For the present and future (Series I) tenses, intransitive unaccusative verbs have nominative subjects, as shown in (2a). In the aorist, the subject remains nominative — it does not become ergative, as shown in (2b). The sentences in (3) show that unaccusative psychological verbs (Class 4) in Georgian that have dative subjects and nominative objects also do not change the case marking on subject and object in the aorist. Class 4 psych verbs resemble Class 2 unaccusatives in that, like the nominative subject of the Class 2 verbs, the dative subject of the psych verb is syntactically derived from some VP internal position.

(2) a. *es saxl-i ivane-s a=[u-šendeb]-a.*
this house-NOM Ivan-DAT PreV=[built$_2$]-INFL$_{\text{IIIso}}$
'This house will be built for Ivan.'

b. *es saxl-i ivane-s a=[u-šend]-a.*
this house-NOM Ivan-DAT PreV=[built$_2$]-INFL$_{\text{IIIso}}$
'This house was built for Ivan.'

(3) a. *šen pelamuš-i g-[i-qvar]-s.*
you-DAT pelamusi-NOM AGR-[like$_4$]-INFL$_{\text{I}}$
'You like pelamusi.'

b. *šen pelamuš-i g-[e-qvar]-e.*
you-DAT pelamusi-NOM AGR-[like$_4$]-INFL$_{\text{II}}$
'You liked pelamusi.'

The same patterning of ergative case, summarized in (6), is observed for ergative case on the subjects in sentences with perfect tense/aspect in Hindi (examples from Mahajan 1991) and for ergative case with all tenses in Basque (examples from the discussion in Marantz 1984b). Note that ergative case is prohibited on the subject of unaccusative verbs in the perfect in Hindi — (4a). Ergative is optional for the subject of unergative verbs, as shown in (4b, c), and obligatory on the subjects of transitives, (4d). In Basque, ergative case occurs across tenses. As in Georgian and Hindi, ergative does not occur on the subject of an unaccusative — (5a). It is obligatory, however, on the subject of unergatives and transitives — (5b, c).

(4) a. *siita (*ne) aayii.* (unaccusative)
Sita-FEM (*ERG) (arrived/came-FEM

b. *kutte bhoNke.*
dogs-MASC.PL barked-MASC.PL

c. *kuttoN ne bhoNkaa.*
dogs-PL ERG barked-MASC.SG

d. *raam ne roTii khaayii thii.*
Ram-MASC ERG bread-FEM eat-FEM be-PAST.FEM

(5) a. *Ni etorri naiz.* (unaccusative)
I-ABS come 1SG-be

b. *Nik lan egin dut.*
I-ERG work do have-1SG

c. *Nik libura ekarri dut.*
I-ERG book-ABS bought have-1SG

(6) Ergative case generalization: Even when ergative case may go on the subject of an intransitive clause, ergative case will not appear on a derived subject.

The sentences in (7) raise another interesting aspect of Georgian ergative case in the aorist. Although the case marking changes from NOM-DAT to ERG-NOM in (1a, c)–(1b, d), the agreement morphology sticks to the NOM-DAT pattern. In particular, the suffixal agreement that normally agrees with a nominative subject will agree with the ergative subject in the aorist.

(7) a. *da=v-[mal]-e.*
PreV=AGR-[hide$_1$]-INFL$_{II}$
'I hid something'

b. *da=Ø-[mal]-e.*
PreV=AGR-[hide$_1$]-INFL$_{II}$
'you hid something'

c. *da= [mal]-a.*
PreV=[hide$_1$]-INFL$_{II}$
'he hid something'

d. *da= [mal]-es.*
PreV=[hide$_1$]-INFL$_{II}$
'they hid something'

In the aorist sentences (7), the suffixal agreement, glossed as INFL, changes with the person and number of the subject, which would be in the ergative case if expressed as an overt NP. This is the same suffixal agreement that would agree with a nominative subject in other tenses. Thus Georgian shows a split ergative pattern in the aorist. Some Indo-Iranian languages closely related to Hindi show a similar split ergative pattern in the tenses that trigger ergative case (see, e.g., Mahajan 1991).

These data raise the problem of what accounts for the generalization in (6), which seems well-supported cross-linguistically. Generalization (6), restated in (8b), is tantalizingly similar to Burzio's generalization, written as a generalization about accusative case as in (8a).

(8) a. Burzio's generalization: no accusative case on an object in a sentence with a non-thematic subject position

b. Ergative generalization: no ergative case on a non-thematic subject (i.e., on an argument moved into a non-thematic subject position)

Although it would be tempting to try to collapse the generalizations in (8), Burzio's generalization is not put correctly in (8). Rather, it is more accurately formulated as in (9):

(9) Burzio's generalization (as a one way implication): If a verb's subject position is non-thematic, the verb will not assign accusative structural Case.

That is, Burzio's generalization is about abstract Case, Case that licenses NPs in object positions. The Ergative generalization isn't about abstract Case but about the morphological realization of case on subjects. The subject position in

Georgian is always licensed by tense/aspect inflection; that is, abstract Case is always (able to be) assigned to the subject position whether the verb is in the present, future, or aorist tense. The agreement patterns illustrated by (7) reinforce the fact that the subject is licensed by INFL; INFL agrees with the subject whether in nominative or in ergative case. However, the morphological shape of the case on the subject is different depending on the tense/aspect and the realization of ergative morphological case is subject to the Ergative generalization. Thus the Ergative generalization doesn't seem to have anything to do with abstract Case, while Burzio's generalization does.

Suppose then it is correct to relate the Ergative generalization to Burzio's generalization and it is also correct that the Ergative generalization is not about abstract Case but about the morphological realization of case. Then Burzio's generalization too may not treat abstract Case but rather the realization of accusative morphological case.

2. Burzio's generalization isn't about Case

Burzio's generalization seems to be about Case because objects are not licensed in a clause if the clause has a non-thematic subject, as in (10). Recall that "the man" in (10a) and "the porcupine" in (10b) should be licensed in the argument positions in which they appear by virtue of the semantic roles they bear in the sentences; these phrases are "projected" into the post-verbal argument positions. Case theory, governed by Burzio's generalization, specifically accounts for these situations in which NPs do not seem to be licensed to appear in the positions into which they are projected.

(10) a. *It arrived the man.
b. *It was sold the porcupine.

Despite its ability to account for structures like (10), there are many examples in the literature of violations of Burzio's generalization — situations in which objects are in fact licensed when there is a non-thematic subject. I've chosen the examples in (11)–(13) since they also violate the morphological accusative case version of Burzio's generalization — it seems that morphological accusative is being realized in a sentence with a non-thematic subject. We want whatever principle that replaces the generalizations in (8) to account for these constructions as well.

Consider the Japanese example in (11a) from Kubo (1989). Kubo argues that this sort of passive, in which the derived subject is the possessor of an

object, patterns with the so-called "direct" passives in Japanese and not with the "indirect" or adversity passives as in (11b). In particular, passives like those in (11a) behave on a variety of tests like other passives with traces in direct or indirect object positions and not like indirect passives like (11b) in which there is no gapped position. Kubo argues that direct passives like (11a) involve movement into a non-thematic subject position while indirect passives like (11b) contain a thematic subject position, into which arguments may be projected at DS. Despite the fact that the subject position in (11a) is non-thematic, the object seems to be licensed by structural accusative Case and appears with morphological accusative case as well.

(11) a. *Hanako$_i$-ga (dorobo-ni) [t$_i$ yubiwa-o] to-rare-ta.*
Hanako-NOM (thief-by) ring-ACC steal-PASS-PAST
'Hanako had a thief steal her ring on her.'

b. *Hanako-ga ame-ni hu-rare-ta.*
Hanako-NOM rain-DAT fall-PASS-PAST
'Hanako had rain fall on her.'

Bresnan and Moshi (1990) show that in what they call symmetrical object languages like Kichaga, passivization of one of the objects of a double object verb leaves the other object with all syntactic object properties. The Kichaga sentence (12a) is an active double object construction; the verb shows object agreement with both objects. (12b, c) contain possible passives of the verb in (12a). Either object may become the subject of the passive verb. Although movement in (12b, c) is into a non-thematic subject position, the object that does not become subject still seems to be assigned abstract accusative structural Case, realized via object agreement on the verb, in violation of Burzio's generalization. If we correlate accusative morphological case with object agreement morphology, (12b, c) violate the morphological version of Burzio's generalization as well as the abstract Case version.

(12) a. *N-á-ɪ-lyì-ɪ-á* *`m-kà k-élyà.*
(He$_i$) AgrS$_i$-AgrO$_j$-AgrO$_k$-eat-BEN wife$_j$ food$_k$
'He is eating food for his wife.'

b. *`M-kà n-á-ɪ-lyì-ɪ-ó* *k-èlyá.*
food$_k$ AgrS$_k$-AgrO$_j$-eat-BEN-PASS wife$_j$
'Food is being eaten for the wife.'

c. *K-èlyá k-ɪ-lyì-ɪ-ó* *`m-kà.*
wife$_j$ AgrS$_j$-AgrO$_k$-eat-BEN-PASS food$_k$
'The wife is being beneficially/adversely affected by someone eating food.'

English raising examples like those in (13b, c) are well-known challenges to Burzio's generalization in any formulation. In (13) the objects of "strike" look as if they are being assigned structural Case by "strike" even though the subject position of "strike" is non-thematic. Note also that the morphological case on "me" and "her" is apparently accusative in (13), although it might be dative.

(13) a. *It struck me that I should have used "Elmer" in this sentence.*
b. *There struck me as being too many examples in his paper.*
c. *Elmer$_i$ struck her as [t$_i$ being too stubborn for the job].*

If, as the examples in (11)–(13) suggest, Burzio's generalization doesn't govern abstract Case, why then are the sentences in (10) bad; why don't we just assign Case to the objects in such structures and be done with it? On standard assumptions, the structures in (10) would have underlying structures as in (14), with empty subject positions.

(14) a. *e* arrived the man.
b. *e* was sold the porcupine.

Suppose we assume the "Extended Projection Principle" or some sort of "subject condition" — some condition that sentences (IPs) require (structural) subjects (cf. the final 1 law of Relational Grammar and the subject condition of LFG). By any such condition, the structures in (14) will have to get subjects to be well-formed. Assuming that movement comes for free while insertion of a dummy subject in environments like (14) is a last-resort option for satisfying the Extended Projection Principle (EPP),[2] we predict the ungrammaticality of (10) without recourse to Case theory at all; the EPP and standard assumptions about the "economy" of derivations (move for free rather than insert a dummy at cost) will suffice. That is, the issue surrounding examples like (10) is not whether or not Case may be assigned in such environments but rather whether sentences are licensed if there is no subject. Since objects may freely solve the subject requirement through movement, it misleadingly appears as if objects are not licensed (assigned Case) if there is no subject.

If this line of thinking is correct, then NPs (DPs) may be licensed to appear in the positions that they do by the EPP; that is, argument structure to syntax mappings plus the need for sentential subjects would account for the distribution of NPs (DPs). So licensing might follow from projection without Case theory. If abstract Case is sufficiently distinct from morphological case, the Case theory might be entirely superfluous.

3. "Case" (=licensing) isn't "case" (morphology)

Linguists have already established that the connection between abstract Case as the means to license NPs and morphological case as what you see on NPs can't be too close. The literature on Icelandic provides the clearest examples of the separation of Case and case (here I rely on Maling 1990; Sigurðsson 1991; and Zaenen, Maling and Thráinsson 1985).

Icelandic quirky case marking shows instances of NPs that get morphological case by virtue of being objects of certain verbs but are not necessarily licensed as objects by getting this case. (15a) contains an example of a double object verb both of whose objects get quirky case. The DATive object is optional. You can passivize the verb with just its genitive object, as in (15b), but in this case the object must become the subject of the passive verb — it may not stay in object position. I'll refer you to the literature on Icelandic for convincing evidence that the GEN must become a subject and is in fact a subject in (15b). Although the GEN NP gets genitive case as an object in (15b), this case does not license the NP in object position; quirky GEN case isn't abstract Case. Note that (15c) is consistent with the notion that it's the EPP, not the need for abstract Case, that is forcing the GEN NP to become a subject in (15b). If we add back the DAT argument in the passive in (15c), it satisfies the EPP by becoming the subject and now the GEN NP is licensed as an object. If we try to explain the obligatory movement of the GEN NP to subject position in (15b) by saying that the GEN NP lacks abstract Case as an object in the passive, we raise the question of why this NP can suddenly get abstract Case as an object in the passive in (15c) when there's a DAT argument around.

(15) a. *María óskaði (Ólafi) alls góðs.*
Mary-NOM wished Olaf-DAT everything-GEN good-GEN
b. *Þess vas óskað.*
this-GEN was wished
c. *Henni var óskað þess.*
her-DAT was wished this-GEN

The examples in (15) illustrated how an NP could get (morphological) case without being licensed. In (16) we see the opposite situation — a NP is licensed as an object without getting case. Icelandic has a number of verbs that show a DATive subject and a NOMinative object. One could claim that the NOM object is getting abstract Case from inflection, and in fact the verb may agree with a NOM object. But if tensed inflection with agreement is the source of NOM case on the objects of DAT subject verbs, we would expect the object to lose its NOM case in an infinitive, because infinitive inflection does not assign NOM. Instead, as illustrated in (16), such DAT subject/NOM object verbs still take a NOM object in infinitival constructions although there is no element around to assign NOM case.

(16) *Ég tel henni hafa alltaf þótt Ólafur leiðinlegur.*
I believe her-DAT to-have always thought Olaf-NOM boring-NOM

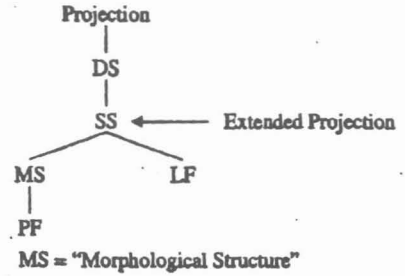
To review, Icelandic shows clear examples of NPs being assigned (quirky) morphological case in a position without being assigned abstract Case in that position and clear examples of NPs being assigned Case in a position without being assigned morphological case there. In short, the Icelandic facts argue for a clean separation of licensing and morphological case realization. The data we have examined lead us to suggest a grammar in which NPs are licensed via projection (and the EPP). Morphological case interprets the syntactic structures licensed by projection but does not itself figure into licensing.

Within such a grammar, we want ergative and accusative cases to be morphological cases whose very definition prevents them from being realized in certain syntactic configurations, those covered by the generalizations in (8).

4. The structure of the grammar

I will assume a standard model of grammar as in (17), in which lexical properties are projected into DS and in which the Extended Projection Principle demands the presence of subjects at SS. This is a model without Case theory.

(17)



MS = "Morphological Structure"

The present paper is not the appropriate space in which to sketch an entire theory of morphology to go along with this picture of grammar (see e.g., Halle 1991 for some discussion). For present purposes, I will assume that case and agreement

morphemes are inserted only after SS at a level we could call "MS" or morphological structure. The presence of such case and agreement morphemes is a language particular option. Thus English has case only on pronominals while languages like Russian require a case suffix on every noun.

It's crucial that in this model, case and agreement are part of the PF branch of the grammar, an interpretative component. Government relations at SS determine the features of case and agreement morphology but the PF will find a way to interpret any well-formed SS. Syntactic ungrammaticality will not result from the realization of case and agreement. In particular, there is always a default case realization. If no principle or language particular property determines the case features for a case morpheme on a noun in a particular language, there will be default case features for the language that this morpheme will pick up.

I've been arguing for a principle like that in (18).

(18) Nominal arguments are licensed by (extended) projection, not by Case or by morphological properties.

The distribution of PRO immediately raises problems for this principle. The near complementary distribution between PRO and lexical NPs is summarized in (19). I put the "never" in quotations in (19) because, of course, there are often ways to realize lexical NPs as the subjects of infinitivals — e.g., in English making them the object of the preposition "for" or placing the infinitival clause as the complement to an ECM (raising to object) verb.

(19) a. PRO is only licensed in the subject position of infinitivals.
b. Lexical NPs are "never" licensed in the subject position of infinitivals.

Another way to state this problem is that (extended) projection alone does not license PRO or pro. If projection were sufficient to license PRO, we should find PRO in the object position in (20a), since it could be projected and thus licensed there.

(20) a. **Elmer bought PRO.*
b. *Elmer preferred [PRO$_i$ to be given t$_i$ the bigger porcupine].*

One might say the PRO is only projected as the subject of infinitivals, thus PRO is licensed via projection. However, (20b) shows that PRO can't be projected only in the subject position of infinitivals; PRO in (20b) is projected as an object and moves to subject position to satisfy the EPP. Thus PRO must be allowed to be projected into a position where it may or may not be licensed.

Extended projection also doesn't explain why lexical nominals are not licensed in subject position of infinitivals, as in (21).

(21) **Hortense tried [Elmer$_i$ to be given t$_i$ a porcupine].*

Although (extended) projection doesn't determine the distribution of PRO, neither does Case theory in other approaches. The explanation for the distribution of PRO and lexical nominals is distributed among a few principles, as listed in (22).

(22) a. PRO theorem: PRO cannot be (lexically) governed
b. PRO does not need Case
c. Lexical NPs need Case

As Sigurðsson (1971) shows, PRO does in fact get morphological case in languages like Icelandic. Standard theories still require a stipulation that PRO doesn't need abstract Case as in (22b) and that lexical NPs do, as in (22c), in addition to the stipulation that PRO is a pronominal anaphor or whatever determines that PRO cannot be lexically governed, as stated in (22a).

We must admit that it is not (extended) projection that determines the distribution of PRO and the complementary distribution of PRO and lexical nominals. It is something about the S-structure position of PRO and lexical nominals that licenses PRO in environments where lexical nominals are impossible. Therefore, we need something that would be the RESidue of Case theory. Marantz (1984a: 85) gives one version of such a principle:

(23) The Surface Appearance Principle: A constituent X will appear in the surface structure tree by virtue of bearing a relation with respect to some item Y iff Y is a lexical item (i.e., not a phrase).

In Marantz (1984a), (23) insured that phonologically realized constituents had to be governed by lexical items or tense. PRO was precisely that NP that did not appear in surface structure, by virtue of not being lexically governed. Sigurðsson (1991: 343) argues for a similar principle:

(24) Proper Head Government Condition: pro and lexical NPs in A-positions must be properly head governed.

And, of course, for Sigurðsson, PRO must not be properly head governed. For present purposes, we acknowledge that something remains of Case Theory besides projection theory, as stated in (25):

(25) RES(Case Theory): an NP argument is PRO iff not governed at S-structure by a lexical item or [+tense] INFL

Again, (25) acknowledges a role for S-structure or PF beyond the EPP in the licensing of arguments.

Small pro would seem to be licensed by the morphological properties of agreement, in contradiction to principle (18) (see the papers in Jaeggli and Safir 1989). However, it is not the property of a particular agreement affix itself that is supposed to license pro on theories that tie the licensing of pro to agreement. Rather, it is the agreement system of a language as a whole that determines whether pro is licensed by agreement (see, again, Jaeggli and Safir 1989). Still, since the licensing of pro is tied to an S-structure position (the position connected to Agr at S-structure) and not to (extended) projection by itself, the licensing of pro is also an exception to the generalization in (18).

To review, in a grammar without Case theory, (extended) projection plus independently required principles governing the distribution of PRO and pro license the appearance of NPs (DPs) in argument positions. Morphological case and agreement appear at MS, as part of the phonological component. The morpho-phonology of case and agreement interprets S-structure relations between constituents but does not determine the distribution of NPs in argument positions.

5. case realization at Morphological Structure

Recall that in the theory diagrammed in (17), case morphemes are added to stems at MS according to the morphological requirements of particular languages. When a word contains a CASE affix, this affix will acquire its particular CASE features according to the syntactic relations of its host stem at SS (assume that MS preserves all the syntactic relations of SS). Consider a noun that appears with a CASE affix at MS, as in (26a), because it's a morphological fact about the language in question that nouns require such affixes. To simplify matters, let's suppose that markers like NOM, ACC, ERG, etc. as in (26b) are the morphological features that the CASE affix is looking for. What determines which of these features the CASE affix will acquire?

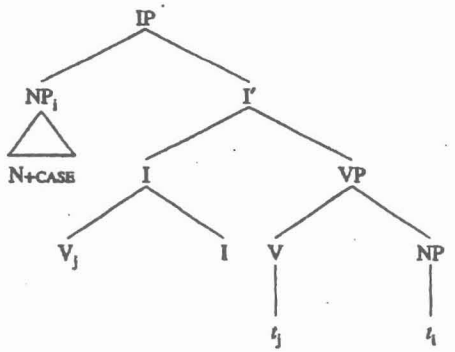
(26) a. N+CASE
b. CASE features: NOM, ACC, ERG, DAT, GEN, etc.

The CASE features on the affix will depend on which elements at MS govern the maximal projection of the N to which the CASE affix is attached (or which elements govern the DP that is headed by the D that governs the NP that is headed by the N in question). For the purposes of all syntactic principles, including the realization of CASE, the relevant objects at MS are not NPs per se but chains — A-chains (argument chains) that include the traces of NP-movement. Thus the CASE features on the CASE affix may depend on what governs any link in the chain of the NP headed by the N+CASE.

(27) CASE features are assigned/realized based on what governs the chain of the NP headed by N+CASE

Given the principle in (27), consider an example of NP-movement as in (28). The chain of the subject NP is governed both by the V+I that governs the subject itself and the trace of the V that governs the trace of the subject. Either the V+I or the V, then, might determine CASE features on the CASE suffix.

(28)



In particular, if the verb in (28) realizes a quirky case, this case would be realized on the subject N because the verb governs a link in the subject's chain. It is principle (27) (taken with the disjunctive CASE realization hierarchy (29) to be discussed below) that accounts for the well-known preservation of quirky case in Icelandic passive and raising constructions. The chain of an NP involved in passive and raising will always be governed by the V of which it is a semantic argument; thus, this V may determine the CASE features on the NP no matter where the NP ends up at SS, MS, or PF.

The subject N in (28) looks like a candidate for at least three different CASES. It might get quirky DAT CASE if the verb that governs the object position requires DAT. It might get ACC CASE since the object trace, part of the chain of the subject, is in object position. And it might get NOM CASE since part of its chain, the subject position, is governed by Inflection. As a matter of fact, we know that in such configurations, the subject will appear as DAT, not NOM or ACC, if the verb that governs its trace requires a quirky DAT CASE. And we know that the subject will never appear with (non-quirky) ACC. What insures these results?

Case realization obeys a disjunctive hierarchy that is typical of morphological spell-out, as discussed, e.g., in Halle (1989, 1991). The more specific, more particular CASE requirements win out over the more general, less particular CASE requirements. The hierarchy is roughly that in (29). Again, this is a disjunctive hierarchy: going down the list, as soon as a CASE affix finds some CASE feature that it is eligible for, it takes that CASE and leaves the list.

(29) case realization disjunctive hierarchy:
- lexically governed case
- "dependent" case (accusative and ergative)
- unmarked case (environment-sensitive)
- default case

Lexically determined case takes precedence over everything else, explaining the preservation of quirky case when an NP moves from a position governed by a quirky case verb to a position of NOM or ECM ACC case realization. "Dependent" case is what we will call accusative and ergative; dependent case will be explained immediately below. Unmarked case may be sensitive to the syntactic environment; for example, in a language GEN may be the unmarked case for NPs inside NPs (or DPs) while NOM may be the unmarked case inside IPs. Finally, there is a general default case in the language when no other case realization principle is applicable.

The universal availability of a default case realization mirrors the universal existence of default phonological "spell-out rules" for the phonological realization of morphemes. Disjunctive hierarchies with defaults are characteristic of the morphology (of the morpho-phonological component). A sentence will never be ungrammatical because no case features are assigned to a CASE affix; there will always be a default case realization. Thus case, like morpho-phonology in general, merely interprets syntactic structures and does not filter them.

6. Dependent case

What now about ACC and ERG case, which I have called the "dependent" cases? ACC and ERG are assigned by V+I to one argument position in opposition to another argument position; hence ACC and ERG case on an NP is dependent on the properties not only of the NP itself but also of another NP position governed by V+I. We assume here that, when V moves and adjoins to I, the resulting V+I governs object positions that are governed by the trace of V either (i) directly (because the VP headed by the trace of V is no longer a barrier to such government), or (ii) because the antecedent of the trace is part of the V+I unit, or (iii) through the trace of V; for present purposes, we do not need to decide which combination of these possibilities is correct. ACC is the name for the dependent case that is assigned downward to an NP position governed by V+I when the subject position governed by V+I has certain properties. ERG is the name for the dependent case assigned upward to the subject position when V+I governs downward an NP position with certain properties. These certain properties are listed in (30a, b).

(30) Dependent case is assigned by V+I to a position governed by V+I when a distinct position governed by V+I is:
- a. not "marked" (not part of a chain governed by a lexical case determiner)
- b. distinct from the chain being assigned dependent case

Dependent case assigned up to subject: ergative
Dependent case assigned down to object: accusative

Condition (30a) is something of a stipulation as written. It prevents ACC case on an object if the subject is assigned a quirky case by a verb. There are ways of making (30a) follow from other principles, but they involve an investigation of quirky case that would take us beyond the concerns of this paper. (30b) simply clarifies what it means for the dependent case to depend on a *distinct* NP from the NP that gets dependent case. One link in a chain can't count as distinct from another link for the assignment of dependent case. Since case is assigned to chains, all the links are part of the same entity.

Condition (30b) explains why we couldn't get either ACC or ERG on the derived subject NP in (28). Both positions governed by V+I in (28) are in the same chain; thus there are not two distinct positions to set in opposition for the assignment of dependent case. On this theory, it is the definition of dependent case itself that explains the data covered by Burzio's generalization and the Ergative generalization in (8). A slight conceptual jump is required to see why Georgian, Hindi, and Basque can get ERG case on the subject of an intransitive verb when the subject is not raised from an object position — i.e., when the verb is unergative (subjects of unergatives can bear ergative case, unfortunately for the terminology). In the case of normal intransitives, the object position will be empty and thus available to count as the distinct "unmarked" position in opposition to which ERG case may by realized. Should an unfilled position be considered visible for the realization of dependent case? Apparently Georgian and Basque obligatorily count such an unfilled position as visible while Hindi, which shows optional ERG on the subjects of intransitives in the perfect, only

optionally "sees" such an unfilled position. So-called "ergative" languages such as Inuktitut that never allow ERG on the subject of an intransitive verb, either unergative or unaccusative, apparently never consider an unfilled position as a distinct position for the realization of dependent case.

The definition in (30) explains the situations in which the generalization in (8) seemed appropriate. It looks like ACC case can't be assigned when there's a non-thematic subject because in most situations in which there's a non-thematic subject, an NP governed by V+I raises to this non-thematic subject position and thus the subject and object positions are filled by members of the same chain. Similarly, ERG case will not generally be assigned when an NP moves into a non-thematic subject position because again the subject and object positions will belong to the same chain. Although the examples in (11)–(13) violate (8a), they are consistent with the definition of dependent case. Although these sentences have non-thematic subject positions, the derived subject and the NPs getting ACC case are in distinct chains, allowing for dependent case assignment.

The present approach to dependent case should be distinguished from superficially similar approaches that use case hierarchies for the distribution of cases within a clause (see, e.g., Yip et al. 1987) or that rely on notions of dependent case requiring that one case be assigned in a clause only after some other case is assigned or realized. On the present theory, although the CASE feature in an NP may depend on syntactic properties of other NPs in a clause, CASE in an NP does not depend on the CASE features in other NPs. Thus the assignment of dependent case does not depend on the previous assignment of NOM or some other "independent" case but rather on the existence of an independent argument position with certain syntactic properties. ECM clauses such as, "I consider [him to have discovered her too late]," in which both the subject and object receive ACC dependent case (the subject from a higher V+I), show that ACC in a clause does not obviously depend on the prior assignment of NOM in the clause. The hierarchy in (29) serves to determine the CASE features for an individual CASE affix; it does not serve to distribute cases through a clause. Thus this hierarchy reverses what might be expected for a hierarchy of cases for a clause; for a particular NP, dependent case (ACC) takes precedence over independent case (NOM).

7. Split ergativity between case and agreement

On the theory under discussion, Agr is a morpheme added to I at MS for those languages that demand morphological agreement to create a well-formed inflected verb as a word; agreement, like case, is a morphological property of certain syntactic categories of words in certain languages. While the CASE morpheme picks up case features keyed to the syntactic environment of the NP with which CASE is associated, Agr picks up person and number features from NPs governed by the V+I that Agr attaches to. Although the features on CASE and Agr reflect similar syntactic relations, the actual determination of these features depends on potentially idiosyncratic properties of governors such as particular tenses in I or quirky case requirements of Vs. It is not necessary that the governing properties of a particular tense in I that determine, for example, that dependent case will be assigned upward (=ERG case) correlate with a particular property of the Agr on that I that determines that Agr will pick up the features of the ERG NP or of some other NP. Thus the theory leaves open the possibility of split ergative systems, like that described above in Georgian, for which the ERG-NOM patterning of case with certain tenses does not correlate with a NOM-ACC pattern in the agreement system.

Assuming that an Agr morpheme on V+I picks up the features of an NP (DP) that is governed by V+I, the question, of course, is which NPs governed by V+I determine the person and number features of Agr. Here, the story is very similar to that given for the determination of CASE features above. In particular, there is dependent agreement, unmarked agreement, and of course, default agreement that stand in the same disjunctive hierarchy as dependent, unmarked and default case as in (29) (I leave open here the issue of what "lexically-governed" Agr might be). Dependent Agr picks up features of one NP governed by V+I in opposition to a distinct, unmarked NP also governed by V+I, where the definitions of distinct and unmarked are as in (30b, a). Dependent Agr with the subject in opposition to an object position we might call "ergative" Agr while dependent Agr with an object in opposition to a subject we could call "accusative" Agr. Unmarked agreement would be with any NP governed by V+I. Finally, default agreement would provide a set of person and number features for Agr when V+I does not govern any NP (or perhaps, any "unmarked" NP in the sense of (30a)).

We saw above that CASE in Georgian depends on the Series of the tense/aspect in I(NFL). Series I INFL assigned dependent case downward, yielding a NOM-ACC(=DAT) pattern, while Series II INFL assigned dependent case upward, yielding an ERG-NOM pattern. Regardless of the case-determining properties of INFL, the Agr on V+I in Georgian has its own properties and works the same way across the board. In particular, the Agr in V+[I+Agr] triggers dependent up agreement, coupled with unmarked and default agreement, as shown in the disjunctive hierarchy in (31) — again, since this is a disjunctive hierarchy, Agr will leave the hierarchy as soon as it picks up features from an eligible NP.

(31) Georgian suffixal Agr on I:
- dependent up (picks up the features of an unmarked NP in subject position in opposition to a distinct NP position governed by V+I)
- unmarked Agr (picks up the features of an unmarked NP governed by V+I, but only the person features of a (3rd person) NP inside the VP)
- default Agr (if no NP is governed by V+I, the Agr is 3rd person singular)

The one notable peculiarity of the Georgian Agr in (31) is that it will not agree in number with a (3rd person) NP that is VP internal, i.e., when Agr governs this NP downward (for example, when there's a DAT — "marked" — NP in subject position).

On the theory under discussion, canonical "subject agreement" is a combination of dependent agreement upward and unmarked agreement, as in (31). Subjects of transitive clauses would trigger dependent agreement, while subjects of intransitives and objects of verbs with "marked" subjects (e.g., quirky case-marked subjects) would trigger unmarked agreement.

Since the subject that gets ERG in Georgian Series II sentences and the subject that gets NOM in Series I sentences are equally unmarked in the relevant sense, the Agr described in (31) will pick up the person and number features of both sorts of subjects. Since DAT subjects are marked in the relevant sense, this Agr will not pick up the features of a dative subject but will pick up the features of a NOM object instead.

Again, the agreement properties of Georgian Agr hold across the Series I Inflections that assign dependent case downward and the Series II Inflections that assign dependent case upward. There is no reason to expect a correlation between the "directional" features of INFL for case marking and the "directional" features of Agr for agreement. Split ergativity of the Georgian sort simply exploits this lack of correlation.

We have seen that the work of Burzio's generalization could be split between the definition of dependent case and the requirement for sentential subjects encoded in the EPP. Making the realization of morphological case and agreement explicitly depend on government relations at SS allowed for the complete elimination of Case theory as involved in the licensing of NP arguments or the spell-out of case or agreement. Licensing now generally follows from the semantics to syntax interface and the subject requirement of the EPP. The theory that results from abandoning Case theory and fleshing out the realization of morphological case has the added advantage of providing an explanation for the Ergative generalization in (8) and the connection between Ergative and Burzio's generalizations.

Acknowledgments

This is a lightly revised version of the talk I read at the ESCOL conference; since the paper was written as a talk, I invite the reader to read it out loud to herself. I thank audiences at ESCOL at Cornell for helpful comments and Germán Westphal for his patience.

Notes

1. The Series of the tense is indicated by a roman numeral on INFL (= tense); I follow Halle (1981) presentation of tense "Series" and verb "Classes."
2. Or that expletive subject constructions have their own peculiar semantics and thus may be projected directly in DS as expletive subject sentences.

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