On Diagnostics of Structural Case and the Nature of Ergative Case: A Reply to Woolford 2006

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1   Structural Versus Non-Structural Case

Almost everyone agrees that case marking on nominals splits into two distinct types. The first, referred to as "structural case," does not depend on the particular thematic role assigned to the nominal or the particular lexical item that selects it (typically a verb). So, the case that such a nominal receives might change when thematic roles and lexical items are held constant, but the structure of the clause containing those lexical items changes. The canonical instance of this case change occurs in the passive, illustrated below:

(1) a.   She criticized **me**.
     b.   **I** was criticized (by her).

In this pair of sentences, the first-person singular pronoun bears the same thematic relation to the same verb, *criticize* (it is the criticizee). In the first sentence, however (the active), it receives accusative case; in the other (the passive), it receives nominative case. Accusative and nominative are therefore held to be structural cases.

   The other type of case does not depend on the structure of the clause, and instead depends either on the particular selecting lexical item (typically a verb) or the particular thematic role the nominal bears. So, for instance, dative case in Icelandic, which is regularly assigned to nominals bearing the thematic role of goal, does not change in the passive:

(2) Icelandic

     a.   Þeir   gáfu **konunginum** ambáttina.
          they-Nom gave king-the-Dat slave-girl-the-Acc
          'They gave the king the slave-girl.' (Maling 2002, (44a), cited in Woolford 2006, (3))

     b.   **Konunginum** voru gefnar ambáttir.
          king-the-Dat   were given slave-girl-the-Nom
          'The king was given female slaves.' (Zaenen, Maling, and Thráinsson 1985, (44a))

This type of case has been referred to as "lexical" case, "inherent" case, or "quirky" case; I will refer to it as "non-structural case."

   Beyond the distinction between structural and non-structural case, not much is agreed upon. Some authors, such as Woolford (2006), divide non-structural cases into two sub-categories, depending on whether the case is determined by the particular lexical item involved ("lexical case") or the particular thematic role involved ("inherent case"); Icelandic dative is therefore classified as inherent by Woolford.[1] (A distinction of this sort, and whether it is motivated or not, will not be relevant to this paper.) Moreover, there are numerous *theories* of case assignment, each of which might hypothesize an origin for the distinction between structural and non-structural case, and accordingly redefine those notions along the hypothesized origin. (For example, Chomsky 1981, 170 defines structural case as

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[1]Woolford discusses German ditransitives rather than Icelandic, but Sigurdsson (2002) showed that German dative "subjects" do not have the properties of grammatical subjects. The issue of whether a non-structural-case-marked NP is actually a subject is an important one in discussions of case. It comes up again regarding the Japanese examples in section 6.

case assigned under government by AGR, transitive V, P, or $\overline{\text{N}}$, while non-structural case is case determined by lexical properties of a governing non-nominal category. In contrast, Zaenen, Maling, and Thráinsson 1985 regard structural case as case assigned under default rules, while non-structural case is assigned according to thematic role.) In such cases, much of the debate about structural and non-structural case becomes a terminological one, and one can only evaluate the particular claims being made by evaluating the entire theory of case being espoused.

Woolford (2006), however, tries to give an a-theoretical set of diagnostics to reliably distinguish structural from non-structural cases. Whether this can even be done is suspect; the diagnostics might not apply at all in a given *theory* of the distinction between the two types of cases, or may give different results in different theories (some examples of how this is so are given below). Nevertheless, the point of this paper is to take Woolford's diagnostics at face value, as purely descriptive and a-theoretical tools, and see how well they apply. Her diagnostics are listed below, in the order in which I will discuss them:

1. Non-nominative subjects of tensed clauses

2. Co-occurrence with nominative objects

3. θ-relatedness

4. Case preservation under A-movement

Non-structural cases, according to Woolford, occur on the subjects of tensed clauses; they co-occur with nominative objects; they are related to particular thematic roles; and they are preserved under A-movement (an instance of which is the passive).

One of Woolford's other concerns is to use these diagnostics to categorize ergative case. According to her, ergative case is non-structural. (In this she follows a long line of researchers, for instance Anand and Nevins 2006; Butt 1995; Legate 2006, to appear; Mahajan 1990; Massam 2002; Mohanan 1994; Woolford 1997. The contrasting view, that ergative is a structural case, is espoused by Bejar and Massam 1999; Bittner 1994; Bittner and Hale 1996a, 1996b; Bobaljik 1992, 1993; Davison 1999, 2004; Laka 1993b; Marantz 1991; Phillips 1993, 1995.) By this she seems to mean that, *universally*, in every language, ergative is a non-structural case. Woolford does not appear to consider the possibility that it might differ from language to language, or even from context to context within a language (there are non-structural instances of accusative case in Icelandic, for instance); or the possibility that ergative does not fit into this distinction at all, and maybe we should rethink the distinction as a useful one in a theory of grammar. Again, however, this paper will adopt her own methodology of finding isolated examples from various different languages and applying the diagnostics to them in order to arrive at a universal conclusion; even doing so, ergative seems to be structural, and not non-structural as Woolford claims.

Section 2 addresses diagnostics 1 and 2, and shows that it is not valid to extend them from nominative-accusative languages to ergative-absolutive languages. Section 3 addresses the issue of θ-relatedness, which has been perhaps the major reason that generative syntacticians have viewed ergative case as non-structural. Typologists, in contrast (such as Comrie 1978), explicitly rejected any connection between ergative case and a particular thematic role (such as agent). I go over their arguments and show that there is *no* connection between ergative case and thematic role. Finally, sections 4 and 5 address the diagnostic of case preservation under A-movement, and show that A-movement is really not involved in structural case changes at all. I will therefore argue that the only real a-theoretical diagnostic that can be used is what I gave as the definition of structural case above: case changing when the structure changes but lexical items and thematic roles are held constant. (θ-relatedness is also a valid diagnostic, as implied in this definition, but it must be applied with care.)

Ergative case then comes out as clearly structural. Indeed, there is a prime example in ergative languages of selecting lexical items (verbs) and thematic roles being held constant, but the structure changing just like it does in the passive. This is the antipassive. In the antipassive, the object is removed or demoted to an oblique. In every ergative language, the subject's case changes, from ergative to absolutive or nominative:[2]

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[2]For the purposes of this paper, I will follow Woolford in considering nominative and absolutive to be the same case, the unmarked one. For contrary views, see Legate (2006) and Massam (2006).

(3) Yidin[y] (Dixon 1979, (26–27))

    a.   **wagud[y]a-ŋgu** d[y]ugi   gunda-l (galba:n-da)
         man-Erg   tree.Abs cut-Pres (axe-Inst)

         'The man is cutting a tree (with an axe).'

    b.   **wagud[y]a** gunda-:d[y]i-ŋ   d[y]ugi-:l (galba:n-da)
         man.Abs cut-AntiPass-Pres tree-Loc (axe-Inst)

         'The man is cutting a tree (with an axe).'

(4) Inuit (Bittner and Hale 1996b, (57))

    a.   **Juuna-p** Anna   kunip-p-a-a.
         Juuna-Erg Anna.Nom kiss-Ind-[+tr]-3S/3S

         'Juuna kissed Anna.'

    b.   **Juuna**   (Anna-mik) kunis-si-v-u-q.
         Juuna.Nom (Anna-Inst) kiss-AntiPass-[–tr]-3Sg

         'Juuna kisses/is kissing (Anna).'

In both pairs of examples, the thematic role of the subject does not change from the active to the antipassive (it is the cutter in Yidin[y] and the kisser in Inuit), nor does the verb involved ('cut' and 'kiss', respectively). If the definition of structural case is accepted to be as it was described above, namely case changing when the structure changes but thematic roles and lexical items are held constant, ergative is structural. Section 6 addresses the possible claim that there is an independent transitivity restriction on ergative case, and argues that this is incorrect and unhelpful in trying to account for its distribution. There is simply no denying that ergative case is a structural case.

In one way this is a very minor point, because, as stated above, it is almost impossible to have a non-theoretical discussion of case. On the other hand, it is important to clarify what we take to be the facts that need explaining, and how we group those facts into patterns that will form the basis for a theory. If a given theoretical approach acknowledges the structural/non-structural distinction as an important one, then it had better be consistent in how it defines it and justify treating any particular case as different from any other case. To be more concrete, I believe that those who treat ergative as non-structural, in contrast with accusative and nominative, have not adequately justified doing so. The antipassive and passive facts seem to be entirely parallel; it is therefore incumbent upon any such theory to justify treating them differently. This I believe has not been done, and any theory that distinguishes them is therefore suspect.

2 Woolford's Diagnostics

Below I repeat the diagnostics that Woolford (2006) proposes for identifying non-structural case:

1. Non-nominative subjects of tensed clauses

2. Co-occurrence with nominative objects

3. θ-relatedness

4. Case preservation under A-movement

The last, case preservation under A-movement, is probably the most important, and most closely matches what I took above to be the most generally accepted definition of non-structural case. Nevertheless, stated this way, it is a distinct notion, and we must examine it with care. This examination will take place in sections 4 and 5, where I will show that A-movement is not relevant to case changes in phenomena like the passive; A-movement is neither necessary nor sufficient for case to change.

The third diagnostic, θ-relatedness, is probably a valid one, but it has been seriously misapplied in treating ergative case. Ergative case, as shown in section 3, is most definitely not θ-related on the subject of a transitive

verb, contra what many have said, but it does *appear* to be θ-related when it appears on subjects of intransitive verbs (in those languages that allow this). However, even this is suspect.

Before turning to θ-relatedness and case preservation under A-movement, I will address and dismiss diagnostics 1 and 2 below.

2.1 Non-Nominative Subjects

Woolford's first diagnostic identifies any non-nominative subject of a finite clause as having non-structural case. If we follow Woolford in taking absolutive and nominative to be equivalent, this diagnostic simply defines ergative as non-structural, since ergative is the name given to the case assigned to the subject (of a transitive verb) in ergative languages.

This diagnostic is clearly based on nominative-accusative languages like Icelandic and Russian, where it is true that any subject of a tensed clause that is not nominative has some sort of non-structural case (see discussion and references in Woolford 2006). This can be a non-structural case on a nominal that is promoted to subject, as in the Icelandic examples above (2), or it can be an idiosyncratic case selected by the verb, as in the following Icelandic example:

(5)   Bátnum   hvolfdi.
        boat-Dat capsized
        'The boat capsized.' (Levin and Simpson 1981, cited by Woolford (2))

Is it valid to extend this observation to ergative-absolutive languages as a diagnostic? If all other diagnostics turned out to show that ergative was a non-structural case, then the observation would also be true of ergative-absolutive languages and we could use it as a reliable diagnostic. But without showing independently that it is true in ergative-absolutive languages, it is not valid to use it as a diagnostic, since the case on the subject is exactly what is at issue. What distinguishes ergative-absolutive systems from nominative-accusative ones is the case on subjects of finite clauses. We cannot just take it as given that non-nominative subjects in ergative-absolutive languages are non-structural. So it is not valid to use Woolford's second diagnostic with ergative-absolutive languages.

2.2 Co-occurrence with Nominative Objects

Again following Woolford in taking absolutive and nominative to be equivalent, the second diagnostic also simply defines ergative as non-structural. In ergative languages, ergative is assigned to the subject of a transitive verb while absolutive/nominative is assigned to the object. Again, if other diagnostics showed that ergative was non-structural, we could take it as a true observation that a case that co-occurs with a nominative object was non-structural (since that does seem to be true in nominative-accusative systems like Icelandic and Russian), and use that fact as a diagnostic. But, once again, the nature of the cases in ergative systems is precisely what is at issue. This diagnostic therefore cannot be used in ergative-absolutive languages, either.

Woolford's first and second diagnostics, then, cannot be applied to ergative-absolutive languages. This leaves only θ-relatedness and case preservation under A-movement. I address them in order below.

3   θ-Relatedness

Woolford's third diagnostic is whether the case involved is related to a particular thematic role.[3] As was stated above, dative case in Icelandic and other languages is reliably associated with the thematic role of goal, and dative case is shown to be non-structural by it not changing in the passive. Many of those who view ergative case as non-structural have based this view on the putative fact that ergative case correlates extremely well with the thematic role of agent (see, in particular, Legate to appear, Mohanan 1994, Woolford 1997). I will show that, while θ-relatedness

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[3]Many researchers cite Chomsky (1986) as the definitive source for the view that non-structural case is θ-related: "...inherent Case is assigned by α to NP if and only if α θ-marks NP, while structural Case is assigned independently of θ-marking" (Chomsky 1986, p.193). See also Zaenen, Maling, and Thráinsson (1985).

might be a useful diagnostic for non-structural case, it has to be used with some care; apparent θ-relatedness might be only apparent, as in the case of ergative.

3.1 Comrie's (1978) Arguments Against θ-Relatedness

In contrast with the recent generative work cited above that believes ergative case to be θ-related, earlier work by typologists concluded that ergative case does not, in fact, correlate with any thematic role like agent. Comrie (1978), in particular, argues against any such correlation. He notes that it is violated in both directions; there are ergative-marked nominals that are not agents, as in the following Basque examples:

(6) Basque

    a.   Herra-k   z-erabiltza.
            hatred-Erg you-move
            'Hatred inspires you.' (Comrie 1978, (97))

    b.   Ur-handia-k d-erabilka eihara.
            river-Erg   it-move   mill-Abs
            'The river works the mill.' (Comrie 1978, (98))

And there are numerous agents that are not marked ergative, as in examples of the antipassive (see examples above, and discussion of a "transitivity restriction" in section 6).

Woolford herself is careful to state that the thematic role associated with ergative case is not strictly speaking agent, but is some sort of more general "external argument" role. She herself notes that, in addition to agents, causers of psychological states, and instruments, can be marked ergative in Basque when they are the subject of a transitive verb (see Woolford's examples (38) and (40)). The notion of θ-relatedness is thus weakened considerably; it really looks like ergative in Basque is assigned generally to the subject of any transitive verb, regardless of its specific thematic role. (And Plank 1979 makes the important point that what other roles pattern with agents varies from language to language: in some languages causers—stimuli in Plank's terminology—and instruments pattern with agents, but in others experiencers pattern with agents and causers/stimuli with patients.)

A second argument given by Comrie is also extensively discussed by Plank (1979). This is the fact that, in cases where ergative case on a nominal alternates with some other case, typically absolutive/nominative (the antipassive is one instance of this alternation), the semantic factor involved is the interpretation of the *object*, not the subject. Comrie (p.359) gives an example from the Bzhedukh dialect of West Circassian (taken from Anderson 1976, who attributes it to John Colarusso):

(7) Bzhedukh (West Circassian)

    a.   Č′ˈaaλ-m č′əg°-ər yaź°a.
            boy-Erg   field-Abs he-plows-it
            'The boy is plowing the field.'

    b.   Č′ˈaaλ-r č′əg°-əm   yaź°a.
            boy-Abs field-Nondir he-plows-it
            'The boy is plowing away at the field (but may not complete it).'

As discussed by Plank (1979), ergative case typically "is contingent upon the presence of a particularly salient patient," whereas the use of some other case indicates that "patients of two-place predicates lack the salience property of complete, direct or permanent involvement" (p.28). Plank also refers to this as a "holistic" versus "partitive" interpretation of the object, and Comrie (1978, p.363) adds some other semantic distinctions that languages encode in this manner, all of them involving the object. Plank himself argues that ergative case systems are tied to the semantic role of *patient*, and not to that of agent. (See also section 3.4 on "Split-S" systems that permit ergative case on the subject of agentive intransitive verbs; even in these languages, it appears that semantic factors relate to the object case, and not to the ergative case.)

A third argument that Comrie gives against ergative being θ-related is that "the close relation between ergativity and agentivity in some languages is counterbalanced by a close relation between ergativity and nonagentivity in some others" (Comrie 1978, p.367). Comrie cites the example of Dalabon, an Australian language, where the ergative suffix is used with all inanimate subjects but not with all animate subjects, although agents are typically animate. In fact, Silverstein (1976), noting other such tendencies, suggested that the function of ergative case is to mark non-typical agents, not agents in general.

Comrie's fourth and, in my view, most important reason for rejecting any claimed correlation between an external argument role and ergative case is the point made in the following quotation: "It should be noted initially that there is bound to be a high correlation between ergative noun phrases and agentive noun phrases simply because As [subjects of transitive verbs] are typically high on the scale of agentivity; this is a factor quite independent of ergativity, however: as pointed out to me by Susumu Kuno, Japanese has a rather strong agentivity requirement on As [transitive subjects], but no morphological or syntactic ergativity correlating with this" (Comrie 1978, p.366).

This point cannot be over-emphasized. To the limited extent that ergative case *is* correlated with some external θ-role (or roles), the correlation is actually between *subjects of transitive verbs* and external θ-roles. In all languages, including nominative-accusative languages, subjects of active transitive clauses are generally not patients/themes and generally are agents, instruments, or causers. Because this is true of nominative-accusative languages, too, the correlation is *not* with ergative case. This point is implicit in Comrie's (1978) and Dixon's (1979) label for the subject of a transitive clause: "A," evoking Agent. But A is the label for the transitive subject of a nominative-accusative system, too, where it is identified with S, the subject of an intransitive. It is the A role that correlates with some external θ-role, not ergative case. Ergative case is just the name for the case that appears on the A in ergative languages, which is differentiated from both S and O (object of transitive). Its θ-relatedness is only derivative.

In summary, ergative is not θ-related because it does not reliably mark agents (there are non-agents with ergative case and agents without ergative case); to the extent that there is some semantic factor involved, that factor is the interpretation of the *object*, not the subject marked with ergative case; there are languages where ergative is associated with nonagentivity; and, to the extent that ergative case does correlate with some external θ-role, it does so only derivatively, because transitive subjects in all languages generally have an external θ-role.

3.2 Ergative Versus Accusative and Marantz's Generalization

In fact, if one is being consistent, one should view accusative case as θ-related, too, since it is the case that appears solely on O, and Os are fairly well correlated with patient-like roles in the world's languages. Nevertheless, most researchers agree that accusative case is *not* θ-related. The reason seems to be the fact that there are instances of accusative case appearing on non-thematic objects, such as NPs raised to object:

(8) a. I believe **him** to have defeated the trolls.
    b. I believe **there** to have been a riot.

The role of the accusative-marked pronoun in (8a) is agent (of the embedded verb), not patient; and the expletive in (8b), which we can assume to have accusative case although we cannot see it, presumably has no θ-role at all.

In contrast, it has been claimed that ergative case never appears on non-thematic subjects, making ergative case, but not accusative, θ-related. This has been codified as Marantz's (1991) Ergative Generalization:

(9) 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. (Marantz 1991, (6))

However, Marantz himself points out that the relevant phenomena that would prove or falsify this generalization do not exist. Ergative case is generally limited to transitive clauses. Most verbs with derived subjects are formally intransitive, such as passives (even passives of ditransitives; see below), and so the derived subject will not be assigned ergative. As I will discuss in section 3.4 below, ergative case on intransitives in the languages that allow it is restricted to a subset of intransitive verbs. No verb that has a derived subject is a member of this subset. This restriction may appear to be θ-related, but as I will discuss below, it arguably is not.

The relevant cases to look for to prove or falsify Marantz's Ergative Generalization would be raising verbs that also have an object, like the famous English case below:

(10) a. He strikes me as having been proven wrong.

  b. There strike me as being too many examples in this paper. (modified from Marantz 1991)

If an ergative-absolutive language had a raising verb like this, it would tell us whether Marantz's Generalization was a spurious one (as Marantz's own theory predicts it to be) or a valid one. If the raised subject received ergative case, even when it was not semantically an external argument, it would definitively prove that ergative is assigned structurally and not semantically (i.e., it is not θ-related). If it could *not* receive ergative case, it would suggest (contra all of Comrie's arguments above) that ergative case is indeed θ-related. Unfortunately, no ergative-absolutive language that I know of has been found to have a raising verb like English *strike as*.

The reason that ditransitives are generally not relevant is that one of the objects typically is marked with a non-structural case like dative. When such a verb is passivized, the verb is considered formally intransitive; that is, oblique and non-structural-case-marked objects are not considered true objects (see the discussion in Marantz 1991). So the NP promoted to subject receives nominative/absolutive case, and not ergative:[4]

(11) Inuit

  a. Juuna-p   atuagaq   **miiqqa-nut** nassi-up-p-a-a.
      Juuna-Erg book.Abs child-Pl.Dat send-UT-Ind-[+tr]-3Sg/3Sg
      'Juuna sent the children a book.' (Bittner 1994, (72b), p.84)

  b. **imiq**   Aqqalum-mit **iga-mut** immi-un-ni-qar-p-u-q.
      water.Abs Aqqaluk-Abl pot-Dat pour.into-UT-Ger-Have-Ind-[–tr]-3Sg
      'The water was poured into the pot by Aqqaluk.' (Bittner 1994, (77b), p.86)

Since ergative parallels accusative in this regard, as the Icelandic examples from (2), repeated below, show, this does not mean that ergative is θ-related while accusative is not:

(12) Icelandic

  a. Þeir   gáfu konunginum **ambáttina**.
      they-Nom gave king-the-Dat slave-girl-the-Acc
      'They gave the king the slave-girl.' (Maling 2002, (44a), cited in Woolford 2006, (3))

  b. Konunginum voru gefnar **ambáttir**.
      king-the-Dat were given slave-girl-the-Nom
      'The king was given female slaves.' (Zaenen, Maling, and Thráinsson 1985, (44a))

(That is, both accusative and ergative disappear in the passive of a ditransitive, and are replaced by nominative/absolutive.)

However, I bring up ditransitives because there are some cases where both objects in a ditransitive seem to receive structural accusative case. English is a prime example. Both objects are in the accusative form if pronominal:

(13) We sent **him them**.

Contra many analyses of ditransitives (e.g., Chomsky 1981), both accusative cases are shown to be structural by dialects of English that permit passivization of either object. If the first object becomes the subject, it changes its case, from accusative to nominative; if the second object becomes the subject, it also changes its case:

(14) a. **He** was sent them.

  b. **They** were sent him. (where *him* is the goal)

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[4]The morpheme glossed as "Ger" for "gerundive" is one of two passive markers in Inuit (Bittner 1994, p.79).

So what we need to look for is an ergative-absolutive language that, like English, assigns two structural object cases in ditransitives. There are some possibilities, namely, Enga and Ngiyambaa, both of which have two absolutive-marked objects:

(15) namba-mé énda   dóko   mená dóko   maí-y-ó
      I-Erg   woman Det.Abs pig   Det.Abs give-Past-1S.Subj

      'I gave the pig to the woman.' (Enga, Li and Lang 1979, 312)

(16) Guya=ndu   bura:y   ŋu-nhi.
      fish.Abs=2.Nom child.Abs give-Past

      'You gave the child a fish.' (Ngiyambaa, Donaldson 1980)

In such a language, if both absolutives are structural cases, the passive would still be considered formally transitive, and we could see whether a derived subject could bear ergative case. If it could, again Marantz's Ergative Generalization would be shown to be spurious; if it could not, we would have some reason to think that ergative case is θ-related. Unfortunately, neither Enga nor Ngiyambaa has a passive. Two absolutive objects apparently arise in causatives in Southern Tiwa, too (Rosen 1990), but none of the sources I have been able to track down show passives of causatives in this language.

At this point, then, there simply are no cases that could confirm or disprove Marantz's Ergative Generalization. However, I would like to offer a case that has not previously been viewed from the standpoint of ergativity. In Algonquian languages, third persons agree with the verb on what is generally considered an ergative pattern: subjects of intransitives trigger the same agreement as objects of transitives, while subjects of transitives trigger distinct agreement. The following examples are from Passamaquoddy (Maine):[5]

(17) a. opuw-**ok**   b. n-tokom-a-**k**   c. '-tokom-a-**wa**-l
          sit-**3P**   1-hit-1Subj/3Obj-**3P**   3-hit-3Subj/ObvObj-3P-Obv
          'they sit'   'I hit them'   'they (proximate) hit him/her (obviative)'

In (17a), the subject of an intransitive verb agrees in a final suffix, which is the same suffix that a transitive object triggers in (17b) (the *o*, phonetically schwa, deletes after a vowel). In contrast, the subject of a transitive agrees in a prefix (initial [h], written as an apostrophe because it only surfaces via its phonetic effect on a following consonant) and in a non-final suffix, here *-wa*.

While the Algonquian literature generally does not discuss this in terms of ergativity, the pattern is the classical ergative one. Subjects of intransitives and objects of transitives trigger the same agreement (what could be called absolutive agreement), while subjects of transitives trigger distinct agreement (ergative agreement). (Algonquian languages may be viewed as having a person-based ergative split: first and second persons agree on a nominative-accusative basis.)

Algonquian languages also have a syntactic process that is relevant for testing Marantz's Ergative Generalization. This is what is referred to as an *inverse*, a construction that reverses the prominence of the subject and the object. Now the logical object agrees on the ergative pattern:

(18) '-tokom-oku-**wa**-l
      3-hit-ObvSubj/3Obj-3P-Obv

      'he/she (obviative) hit **them** (proximate)'

If structural case and structural agreement are simply two sides of the same coin, as many argue (and as is explicitly theorized to be the case in recent work by Chomsky—Chomsky 2000, Chomsky 2001), here is an instance of a non-thematic subject receiving ergative case, as indicated by it agreeing as an ergative. If we look at the agreement patterns in non-ergative clauses in (17), we see that the prefix written as an apostrophe and the suffix *-wa* are

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[5]Algonquian languages distinguish one third person in a given domain (typically the clause) as *proximate*; all others must be *obviative*. I indicate proximates as "3" and obviatives as "Obv." "P" abbreviates *plural*. Letters have their usual values except that <o> is a schwa and the apostrophe is an initial [h] (see text).

reserved for subjects of transitives. A logical object may trigger this agreement in the derived inverse construction, indicating that, in fact, ergative case/agreement may index a derived subject. I submit that it is quite natural to think of the Algonquian agreement pattern as an ergative system, and that the example of the inverse proves that Marantz's Ergative Generalization is a spurious one. (In fact, in a raising to object construction combined with the inverse, the nominal that triggers the ergative agreement may not even be a semantic argument of the verb at all. See Bruening 2001, pp.274–276, for relevant examples.)

Even if one rejects the Algonquian case as an example of ergativity, we simply do not know whether Marantz's Ergative Generalization is a true generalization or not; without the relevant cases, it tells us nothing about the putative θ-relatedness of ergative case.[6]

3.3 Summary

Comrie (1978) gave numerous arguments against any correlation between ergative case and a thematic role like agent. All of these arguments are sound, and the most important one is the fact that any correlation is actually a correlation between subjects of transitive verbs and an external θ-role; ergative case itself is independent of this correlation, since it holds even in nominative-accusative languages. Marantz's Ergative Generalization, that there are no non-thematic subjects that bear ergative case, is a spurious one.

3.4 Ergative Case on Intransitive Subjects

However, ergative case is often claimed to be more clearly θ-related in languages where some subjects of intransitives can have ergative case. In Basque, subjects of transitive verbs and agents of intransitive verbs both receive ergative case:

(19) Basque

    a.   (**Guk**) liburu ugari   irakurri dugu gazte denboran.
            (we.Erg) book many.Abs read   Tr.Aux young time.Loc
            'We read many books in our youth.' (Azkarate 1993, (51a))

    b.   **Hik**   ongi dantzatu duk.
            you.Erg well danced have.you
            'You have danced well.' (Laka 1993a, (5c))

But non-agents of intransitive verbs receive absolutive/nominative case:

(20)   **Hi**   etorri h-aiz.
        you.Abs arrived is.you
        'You have arrived.' (Laka 1993a, (6a))

Basque is thus what has sometimes been called a "Split-S" language (Dixon 1979), or has "active/agentive" case marking (Mithun 1991).

Hindi is another such language. In fact, Mohanan (1994) explicitly argued that ergative case was θ-related in Hindi. However, as Davison (1999, 2004) shows in some detail, the crucial factor is not agentivity of the subject. Rather, a small class of verbs lexically determine that their subject will be ergative. The class differs slightly even in closely related languages, and near synonyms will vary on whether they take ergative or nominative subjects. It is therefore not clear at all that ergative case is θ-related; rather, it is selected by particular lexical items.[7]

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[6]Phillips (1995) presents another possible case, that of Yimas (Papuan). In this language, subjects of intransitives, even non-agentive ones (like the subject of the verb meaning 'die'), can trigger ergative agreement under certain conditions. If the subjects of some nonagentive intransitive verbs are derived, as in the Unaccusative Hypothesis (Perlmutter 1978), Yimas is also a counterexample to Marantz's Ergative Generalization.

[7]Note that, according to the definition of structural case given above, these instances of ergative case are non-structural, since they depend on the selecting lexical item. However, only these instances of ergative case would be diagnosed as non-structural; ergative case in transitives in Hindi would be structural. I believe this is probably the right conclusion; there is no reason, as mentioned in the introduction, that we should expect all instances of ergative case to be the same.

Moreover, as was the case with transitive verbs, it appears that, in some Split-S languages, it is the absolutive/nominative case that is θ-related, not the ergative case. For instance, in Central Pomo, according to Mithun (1991), an NP receives the case that goes on objects of transitives and subjects of non-agentive intransitives only if it is affected and empathized with; otherwise it receives the case that goes on subjects of transitives. It therefore appears in such languages that ergative is a default, and not θ-related at all. This parallels the facts in transitive clauses discussed above, where semantic effects of ergative case relate to the interpretation of the *object*, not the subject.

Finally, it has often been suggested that at least some unergative verbs are formally transitive at some level. Comrie (1978, p.366) offers this explanation for ergative subjects of intransitives in languages like Basque, while Marantz (1991), Bobaljik (1992), Hale and Keyser (1993), Laka (1993b), Bittner and Hale (1996b), among many others, offer formal theories along these lines. This hypothesis seems to be particularly well-supported for Basque, where the correlation between ergative case and the agent θ-role in intransitives seems to be the strongest. If this theory is correct in some instances, even diachronically rather than synchronically, then ergative case in intransitives is not θ-related, either; it simply reduces to ergative case with transitives, which was argued extensively above to not be θ-related at all. (Any relation would be derivative again: it is only agentive intransitives that are formally transitive; like all transitive verbs, they take external thematic roles.)

3.5 Conclusion Regarding θ-Relatedness

Woolford's diagnostic of θ-relatedness might be a useful diagnostic for non-structural case, but it clearly has to be used with some caution. One must be careful to show that the case morphology itself is what is θ-related. Ergative case appears to be (weakly) θ-related, but in fact it is not; subjects of transitive verbs are. Some instances of ergative case on the subjects of intransitive verbs are possibly θ-related, but the matter is not clear at all. In some languages ergative case is simply assigned by a small class of lexical items; in others it is not ergative but absolutive that is θ-related. And, most importantly, it is possible to analyze intransitive verbs that take ergative subjects as formally transitive, in which case the ergative case is not θ-related at all, since ergative case in transitive clauses is not θ-related.

However, it should be pointed out that, given the conclusion of this article that ergative case is structural, we might conclude that the diagnostic itself is sound. Ergative case, on closer inspection, turns out according to it to be structural, and not non-structural.

3.6 Summary: Woolford's Diagnostics

Woolford's first and second diagnostics (non-nominative case on subjects, co-occurrence with nominative objects) cannot be applied to ergative languages. The diagnostic of θ-relatedness can be, but when it is applied carefully, ergative case comes out as structural, not non-structural.

The next two sections turn to Woolford's most important diagnostic, case preservation under A-movement.

4 Case Preservation under A-Movement

As discussed above, the canonical instance of a structural case undergoing a case change when the structure changes is the change from accusative to nominative in the passive. As was also shown above, dative case in languages like Icelandic does not change in the passive, and dative case is therefore non-structural, unlike nominative and accusative.

Woolford takes the relevant change in the passive to be A-movement, namely, movement of the object from an object position to the surface subject position. Her diagnostic therefore is stated as case preservation under A-movement. Woolford then goes on to show what she claims is an instance of A-movement in an ergative language, namely subject-to-subject raising in Tongan. An ergative subject stays ergative when it undergoes this raising, showing, according to Woolford, that all ergative cases are non-structural:

(21) Tongan (Hendrick 2004, (52–53), cited in Woolford 2006, (24–25))

a. ʼE lava [ʼo ako **ʼe Pita** ʼa e lea faka-Tonga].
AUX possible/can COMP learn ERG Peter ABS the language Tongan

'Peter can learn Tongan.'

b. ʼE lava **ʼe Pita** [ʼo ako ʼa e lea faka-Tonga].
AUX possible/can ERG Peter COMP learn ABS the language Tongan

'Peter can learn Tongan.'

There are many reasons to be skeptical of this conclusion. First, it is controversial whether raising in Tongan is, in fact, A-movement; Otsuka (2000) argues that it is not. (However, Otsuka's main argument seems to be the fact that case does not change; the assumption seems to be that, if this were A-movement, the case should change. Clearly a definition of A-movement is necessary, as are independent diagnostics for distinguishing A- from A-bar movement.) Second, in some other ergative languages, an ergative argument *does* change its case in subject-to-subject raising, from ergative to nominative/absolutive. This takes place in the related language Niuean, for instance:[8]

(22) Niuean (Seiter 1983, (11b,12b))

a. Kua kamata ke hala **he tama** e akau.
Perf begin SBJ cut Erg child Abs tree

'The boy (sic) has begun to cut down the tree.'

b. Kua kamata **e tama** ke hala e akau.
Perf begin Abs child SBJ cut Abs tree

'The child (sic) has begun to cut down the tree.'

Similarly, subject-to-object raising in Niuean also shows a change in ergative case correlating with A-movement. An ergative subject changes its case to nominative/absolutive when it raises to object (see also Bejar and Massam 1999 on raising in Niuean):

(23) Niuean (Seiter 1980, (3.76a,3.77a), as cited in Massam 1985)

a. To nakai toka e au ke kai **he pusi** e ika.
Fut not let Erg I Sbj eat Erg cat Abs fish

'I won't let the cat eat the fish.'

b. To nakai toka e au **e pusi** ke kai e ika.
Fut not let Erg I Abs cat Sbj eat Abs fish

'I won't let the cat eat the fish.'

Given this cross-linguistic variation, we should be very worried about Woolford's universal conclusion.[9]

More worrisome is the fact that A-movement is not the only change that goes on in the passive. It is unclear why we should think that A-movement is the relevant phenomenon to look at. At least two other changes take place in the passive: the argument in question undergoes a change in grammatical function, from object to subject; and the verb changes its valence, with another argument being removed. I will come back to these two changes below, after we see in section 5 whether A-movement is the relevant phenomenon (it is not).

Before examining A-movement in detail, however, some discussion of the antipassive is necessary. Note that taking A-movement to be the relevant phenomenon rules out the case change in the antipassive as being an instance of a structural case change, if one believes that the subject is in the same position in the active that it is in in the antipassive. Assuming that it is, the case change in the antipassive must be due to something else in Woolford's theory; I will come back (in section 6) to what this something else might be. This itself is worrisome, in my opinion; by the only a-theoretical definition of structural case that exists, namely, its definition, the antipassive includes a

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[8]Seiter's abbreviations: Perf = perfect, SBJ = subjunctive.

[9]At least one other ergative language apparently maintains ergative case in subject-to-subject raising; this is Marathi, as described in Massam 1985, 62, citing a 1984 LSA presentation by K. Wali and S. Joshi.

type of structural case change, and a theory should relate it to the case change in the passive. If a theory says that it is not related and must be due to something else, it is incumbent upon that theory to motivate this distinction independently. As we will see, however, the best that has been done is posit an additional "transitivity restriction" on ergative case (which simply restates its distribution; see section 6).

However, one could also deny that the subject of an active transitive verb and the subject of an antipassive (or intransitive subjects in general) are in the same position. One theory that does this is presented in Bobaljik (1993). In Bobaljik's theory, there are two case positions, a high Agr1P and a low Agr2P. All arguments start out within VP, and must move to an AgrP to receive case. Transitive clauses are identical in nominative-accusative and ergative-absolutive systems: the subject moves to Agr1P and the object moves to Agr2P. The languages differ in intransitives. In nominative-accusative systems, only the high Agr1P is projected; in ergative-absolutive systems, only the low Agr2P is projected:[10]

(24) a. Transitives: [$_{\text{Agr1P}}$ Subject [$_{\text{TP}}$ [$_{\text{Agr2P}}$ Object [$_{\text{VP}}$ t Verb t]]]]

 b. Nom/Acc Intransitive: [$_{\text{Agr1P}}$ Subject [$_{\text{TP}}$ [$_{\text{VP}}$ t Verb]]]

 c. Erg/Abs Intransitive: [$_{\text{TP}}$ [$_{\text{Agr2P}}$ Subject [$_{\text{VP}}$ t Verb]]]

According to this theory, then, actives and antipassives differ in their A-movement properties. In an active transitive, the subject moves to one A-position, Spec-Agr1P, but it moves to a different A-position, Spec-Agr2P, in an intransitive like the antipassive. In a theory like this, then, the antipassive should diagnose ergative case as structural even using Woolford's own diagnostic of A-movement.

This is an example of how difficult it is to have an a-theoretical discussion of case. Diagnostics can have different results in different theories. In a theory like Bobaljik's, or any theory that distinguishes subjects of transitives from subjects of intransitives as being in different A-positions, Woolford's own A-movement diagnostic diagnoses ergative case as structural.

However, A-movement is actually not the relevant factor, as the next section shows.

5 A-Movement is Not Relevant

A-movement, it turns out, is neither a necessary nor a sufficient condition for a change in case. This was shown as long ago as Sigurdsson (1992); I restate the arguments here.

5.1 A-Movement is Not a Necessary Condition

The case on a nominal can change in the passive even if that nominal does not undergo A-movement. In Icelandic, for instance, some objects (indefinites, at least) can stay in object position in the passive, as the following active-passive pair shows:

(25) Icelandic (Sigurdsson 2006, (24))

 a. Þá   höfðu stúdentar   lesið **kaflana**.
     then had   students.NOM read chapters.the.ACC

 b. Þá   höfðu verið lesnir **kaflar**.
     then had   been read chapters.NOM

Nevertheless, the underlying object still undergoes a change in case, from accusative to nominative. A-movement is clearly not a necessary condition for case to change.

Another example making the same point is Woolford's own passive ditransitive examples from (2), repeated below. Because the dative-marked NP does not change its case when it moves to subject position, we conclude that dative is a non-structural case:

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[10]Bobaljik also posits subsequent movement from Spec-Agr2P to Spec-T(ense)P, to capture syntactic subject properties like binding and control.

(26) Icelandic (repeated from (2))

    a.   Þeir   gáfu konunginum **ambáttina**.
          they-Nom gave king-the-Dat slave-girl-the-Acc
          'They gave the king the slave-girl.' (Maling 2002, (44a), cited in Woolford 2006, (3))

    b.   Konunginum voru gefnar **ambáttir**.
          king-the-Dat were given slave-girl-the-Nom
          'The king was given female slaves.' (Zaenen, Maling, and Thráinsson 1985, (44a))

However, note that the case on the *other* object, the one that does not undergo any movement, *does* change, from accusative to nominative. I think everyone, including Woolford, would agree that this is a change in structural case, but it could not be due to A-movement. Obviously, A-movement is not a necessary condition for case to change.

5.2   A-Movement is Not a Sufficient Condition

A-movement is also not sufficient to cause a change in case, as there are numerous A-movement operations that do not effect case changes, such as A-scrambling in many languages. In Japanese, short scrambling of the object over the subject is diagnosed as A-movement by numerous tests—binding, weak crossover, etc.—but its case remains accusative:

(27)   ? **Karera-o$_1$** otagai$_1$-no   sensei-ga   hihansita (koto).
        they-Acc   each.other-Gen teacher-Nom criticized (fact)
        'Them$_1$ each other$_1$'s teachers criticized.' (Japanese; Saito 1996, (32b))

One could deny that these instances of movement are actually A-movement, and claim that the only diagnostic for A-movement is a change in case. If one takes this route, one would have to identify three distinct kinds of movement: an A-bar movement operation that does not change binding relations or circumvent weak crossover; a second, more local A-bar movement that does; and A-movement. It would be incumbent on such a theory to explain why A-movement patterns with the second type of A-bar movement in changing binding relations, and in being local. (Going this route would also invalidate Woolford's Tongan example, since the relevant movement there would not be classified as A-movement.) In the absence of such a theory, I will go with what I believe is the majority opinion, and assume that A-scrambling is, in fact, A-movement. (Among those who argue for A-movement are Fanselow 1990, Mahajan 1990, McGinnis 1999, Miyagawa 1997; Bošković and Takahashi 1998 argue that scrambling is not movement at all. Frank, Lee, and Rambow 1996 argue that we need to recognize another distinction besides the A-/A-bar distinction.) If scrambling is A-movement, A-movement is not a sufficient condition for a change in structural case.

A-movement is therefore neither a necessary nor a sufficient condition for case to change, and Woolford is wrong to think that it is the relevant operation in the passive.

5.3   Long-Distance Agreement?

However, one could argue that the A-movement that Woolford is using as her diagnostic test has been replaced in Chomsky's recent work by long-distance Agree (Chomsky 2000, 2001). In this theory, accusative case is assigned to a nominal by that nominal Agreeing with v, the head that projects the external argument; in contrast, nominative case is assigned to a nominal by that nominal Agreeing with finite T(ense). The case change in the passive comes about because passive v is "defective" and may not assign case; hence, the object has to Agree with finite T instead. In this theory, what would diagnose structural case would be case on a nominal changing depending on what it is Agreeing with, with or without accompanying A-movement. So, in the Icelandic examples above, the object Agrees with v in the active, but with T in the passive, even though it does not change its position. In scrambling, the A-movement involved would not affect the Agree relations.

However, as pointed out by Sigurdsson 2006 (but the data have been known at least since Sigurdsson 1991), this theory simply cannot be maintained. Nominative case is *not* dependent on finite T in Icelandic. Nominative

case may appear on an object in a "quirky subject" construction even in a non-finite clause—even one that does not permit an overt subject:

(28) Icelandic (Sigurdsson 2006, (12–13))

    a.   Við töldum [henni hafa   leiðst   strákarnir/*strákana].
        we believed her.DAT have.INF found-boring boys.the.NOM/*ACC
        'We believed her to have found the boys boring.'

    b.   Hana   langaði ekki til [að leiðast   þeir/*þá].
        her.ACC longed not   for to   find-boring.INF they.NOM/*ACC
        'She did not want to find them boring.'

(29) a.   Að líka   svona fáránleiki/*fáránleika!
        to like.INF such   absurdity.NOM/*ACC
        'To like such absurdity!'

    b.   Það voru taldir   hafa   verið veiddir fjórir laxar.
        there were believed have.INF been caught four salmon.NOM
        'People believed there to have been four salmon caught.'

In Chomsky's theory, T in infinitives like these is "defective" in the same way that v is in the passive—it may not assign case (that is the explanation for why an overt subject is disallowed). Hence these data are surprising, and problematic. What they show is that nominative case is not dependent on finite T in Icelandic (and they suggest the possibility that it might not be in any language).

Even if one could maintain the Agree theory, it would be very easy (and plausible) to design a theory where ergative was comparable to accusative in its Agree properties. Suppose, for instance, that ergative is assigned by v (via Agree) to its own specifier (Woolford's own theory does this), and the object then Agrees with T. Then in the antipassive, v is "defective," just like it is in the passive, and cannot assign ergative case to its specifier. The subject must then Agree with T instead. (Legate 2006 has a theory very similar to this, although she still regards ergative as non-structural.) In such a theory, ergative would be entirely comparable to accusative, and would come out as structural.

I believe that the evidence given above indicates that neither A-movement nor long-distance Agree is the relevant change in the passive. However, if one does want to maintain that Agree is the relevant operation, ergative is still plausibly structural. Again, it would depend on the theory that one constructed, and one would have to provide independent motivation for treating ergative differently from accusative or nominative in that theory. All of the arguments given above have shown that treating ergative differently is not justified.

5.4   Woolford's Diagnostics: Conclusion

Only one of Woolford's diagnostics, θ-relatedness, turns out to be valid, but ergative case is structural according to this diagnostic, not non-structural. Two of her four diagnostics cannot be applied to ergative-absolutive languages, and A-movement is just irrelevant.

I submit that the only really valid diagnostic for structural case is its definition: case that depends not on particular selecting lexical items or on thematic role, but on the structure of the clause. If case on a nominal changes when lexical items and thematic roles are held constant, but the structure changes, that case is, by definition, structural. Accusative case is structural because it changes in the passive; and ergative case is structural, because it changes in alternations like the antipassive (and in other alternations not discussed here, like noun incorporation).

6   A Transitivity Restriction?

What have those who have held that ergative is a non-structural case said about alternations like the antipassive? In a theory where ergative case is not a structural case, the change from ergative case to nominative/absolutive in

the antipassive must be due to something other than the factors that determine what structural case is assigned. In particular, these theories hold that ergative case is assigned to a designated thematic role (agent or a more vague external argument role), and that thematic role does not change in the antipassive. Such theories must therefore appeal to an additional factor that causes case to change in certain conditions. What could this additional factor be, and why would anyone think they are justified in appealing to it?

The answer seems to be some sort of transitivity restriction. Woolford herself appeals to a transitivity restriction in discussing things that might lead to "misleading" results on her A-movement diagnostic. In Japanese, for instance, one might conclude that dative case on an object is structural, because it changes to nominative in the passive:

(30) Japanese (Woolford 2006, (20a,b))

    a.   John-ga   **Mary-ni**   soodansita.
           John-Nom Mary-Dat consult-Past
           'John consulted Mary.'

    b.   **Mary-ga**   John-ni   soodans-(r)are-ta.
           Mary-Nom John-Dat consult-Pass-Past
           'Mary was consulted by John.'

But, according to Woolford, there is an independent transitivity restriction on dative case that limits its appearance to transitive clauses. It cannot appear in an intransitive. For instance, verbs augmented with a morpheme meaning 'can' take dative subjects, but only when the verb is transitive:

(31) Japanese (Shibatani 1977, 806–807)

    a.   **Taroo-ni** eigo-ga   hanaseru.
           Taro-Dat English-Nom speak-can
           'Taro can speak English.'

    b.   **Akatyan-ga/*ni** moo   arukeru.
           baby-Nom/*Dat already walk-can
           'The baby can walk already.'

If we start with a ditransitive clause, so that the corresponding passive is transitive (according to Woolford), then we can see that dative case is non-structural because it does not change in the passive:

(32) Japanese (Woolford 2006, (21a,b))

    a.   John-ga   **Mary-ni**   sono hon-o   okutta.
           John-Nom Mary-Dat that   book-Acc send-Past
           'John sent Mary that book.'

    b.   **Mary-ni**   sono hon-ga   okur-are-ta.
           Mary-Dat that   book-Nom send-Pass-Past
           'Mary was sent that book.'

(For this argument to work, we have to assume, contrary to what was said above, that NPs marked with dative case do count toward making a verb transitive. But note that this is contradicted by the nominative case that appears on the object, 'that book'. See the discussion above, and more below. We also have to assume that the dative-marked NP is indeed the grammatical subject, an important issue that bears on the question of whether it has, in fact, undergone A-movement.)

Now, the obvious thing to say about ergative case is that there is a transitivity restriction on ergative case, too, in many languages. Then the reason that the ergative case disappears in the antipassive is that the antipassive is not transitive. So, going by Woolford's reasoning, we should just look for an antipassive of a ditransitive. If ergative is indeed a non-structural case that obeys a transitivity requirement, as Woolford claims, then it should not disappear in an antipassive ditransitive. But this is not true at all, as the following examples from Inuit show:

(33) Inuit

    a.   **Juuna-p** atuagaq   miiqqa-nut nassi-up-p-a-a.
          Juuna-Erg book.Abs child-Pl.Dat send-UT-Ind-[+tr]-3Sg/3Sg

          'Juuna sent the children a book.' (Bittner 1994, (72b), p.84)

    b.   **Kaali**   arna-mut   aalisakka-nik tunni-us-si-v-u-q.
          Kaali.Abs woman-Dat fish-Pl.Ins   give-UT-AntiPass-Ind-[–tr]-3Sg

          'Kaali gave the woman some fish.' (Bittner 1994, (78b), p.87)

On Woolford's reasoning, a clause that has a dative-marked NP and one structural-case-marked NP is transitive. The subject of such a clause, then, should be free to ergative, even if ergative case obeys a transitivity restriction. In contrast, on the reasoning given above, dative- and other oblique-case-marked NPs do not count for computing transitivity. The antipassive of a ditransitive is intransitive, as is the passive of a ditransitive, like the Japanese example above. Whatever the conditions on dative case are in Japanese, Woolford does not have them right.

    This points to a more fundamental problem with this whole approach. All along I have been assuming as a descriptive fact that ergative case is limited to being assigned to the subject of a transitive clause (except in "Split-S" languages; see below). I have done so because that is, in fact, the definition of ergative case: it is the case that is assigned to the subject of a transitive clause, in contrast with both objects of transitives and subjects of intransitives. Saying that ergative case obeys a transitivity restriction simply restates the definition of ergative case. Presumably, calling ergative case a non-structural, θ-related case is meant to be a theory of its distribution. However, if one does hypothesize that ergative case is a non-structural case assigned to a particular thematic role, one has to posit a grammatical constraint *in addition* that restates the facts that are in need of explanation! In other words, the fact to be explained is this: ergative case is assigned to subjects of transitive clauses. The theory goes like this: ergative case is a non-structural case assigned to NPs that bear an external thematic role, *plus* there is a constraint limiting its assignment to the subjects of transitives clauses. Obviously, in such a theory, the explanation is more complicated than the facts that are in need of explanation. More damningly, the part that is the actual theory (θ-related non-structural case) has to be augmented with a stipulation of the very distribution that the theory was meant to explain. Such a theory cannot be taken seriously.

    Yet another problem with this approach is that it is inconsistent (once again) in its treatment of accusative case. Accusative case is the name given to the case assigned to objects of transitives, in contrast with both subjects of transitives and subjects of intransitives. The fact that needs to be explained is therefore this: accusative case is assigned to the objects of transitive clauses. Why does this theory not claim that accusative case is a non-structural θ-related case, too, but it also obeys a transitivity restriction? I can see no reason for this inconsistency.

    It has been suggested to me that there are exceptions to any putative transitivity requirement on accusative case, but there are none to the transitivity requirement on ergative case. But this is not true at all. In fact, I am unable to come up with examples of accusative case assigned in intransitives, but there are numerous cases of ergative case assigned to subjects of intransitives. We saw examples of such "Split-S" languages before, like Basque, where agentive subjects of intransitives receive ergative case:

(34)   **Hik**   ongi dantzatu duk.
        you.Erg well danced   have.you

        'You have danced well.' (Laka 1993a, (5c))

Clearly, Basque has no transitivity restriction on ergative case, given (34). But there is a construction in Basque that has been called an antipassive (e.g., Azkarate 1993), namely that illustrated in (35b). In contrast with the transitive clause in (35a), the antipassive still disallows ergative case, and instead has absolutive/nominative assigned to the subject (which still bears the agent role):

(35) Basque

    a.   (**Guk**) liburu ugari   irakurri dugu   gazte denboran.
          (we.Erg) book many.Abs read   Tr.Aux young time.Loc

          'We read many books in our youth.' (Azkarate 1993, (51a))

b.　(**Gu**)　　liburu ugari　　irakurriak　gara gazte　denboran.
   　　(we.Abs) book　many.Abs read.Pl.Art Aux young time.Loc
   　　'We have read many books in our youth.' (Azkarate 1993, (50a))

It is clear that a transitivity restriction is not responsible for the case change in the antipassive here, since Basque has no such restriction, but it still has the case change.

　　Another language that shows the same thing is the Australian language Bandjalang, as discussed by Austin (1982) and Bobaljik (1993). Bandjalang also allows ergative case on the subjects of certain intransitives:

 (36)　　Mali-yu dandaygam-bu yarrbi-ni.
　　　　that-Erg old.man-Erg　　sing-Past.Def
　　　　'That old man sang.' (Austin 1982, (2))

This means, again, that there is no transitivity restriction on ergative case in this language. Again, though, the antipassive still shows the case alternation (37a–b). In fact, even the intransitive verbs that have ergative subjects can undergo antipassivization, and undergo the case change (37c):

 (37)　Bandjalang (Austin 1982, (3–5))
　　a.　**Ngaju** juga-ala　nyabay.
　　　　I.Erg　drink-Pres water-Abs
　　　　'I am drinking water.'
　　b.　**Ngay** juga-le-ela　　nyabay.
　　　　I.Nom drink-AntiPass-Pres water.Abs
　　　　'I am drinking water (repeatedly).'
　　c.　Ngay gala　　juuma-le-ela.
　　　　I.Nom this.Nom smoke-AntiPass-Pres
　　　　'I here am smoking (a cigarette).'

This shows conclusively that the case change in the antipassive could not be due to any transitivity requirement. It really seems to be an instance of structural case changing because the structure changes, just as in the passive.[11]

　　In summary, appealing to an additional transitivity requirement simply restates the definition of ergative case, making the explanation for its distribution include a statement of its distribution; it is inconsistent in its treatment of accusative case; and it is simply wrong, because languages that do not limit ergative case to transitive clauses still show ergative case changing in alternations like the antipassive.

7　Conclusion and Consequences

I have shown that Woolford's diagnostics for non-structural case do not work. Two do seem to be valid in nominative-accusative languages, but cannot be extended to ergative-absolutive languages. θ-relatedness may be a valid diagnostic, but when we apply it carefully to ergative case, ergative case comes out as structural, not non-structural as Woolford claims. The last diagnostic, A-movement, is not relevant at all. I submit that the only valid diagnostic is the very definition of structural case: case that changes when the structure changes, but selecting lexical items and thematic roles are held constant. Ergative case comes out as structural according to this definition (in agreement with the θ-relatedness test, which is included in this definition).

　　I have also argued extensively that theories that treat ergative case as non-structural are not justified in doing so. Ergative case is not θ-related, and appealing to a transitivity restriction simply restates the distribution of ergative case. Theories that treat it as non-structural must therefore be rejected.

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[11]Bobaljik (1993) uses the ability of ergative-taking intransitives to undergo antipassivization in Bandjalang as evidence that they are actually formally transitive. If this is correct, a transitivity restriction may be at work in Bandjalang. But the other objections to appealing to a transitivity requirement still stand.

What sort of theory *is* supported by the facts discussed here? In order to try to answer this question, let us reconsider the notion of transitivity. I have argued that appealing to a transitivity restriction to save the non-structural case theory simply does not work. On the other hand, I have all along been assuming that the distribution of ergative case does in fact depend on transitivity. For the most part this was simply a description of the facts: ergative is the name given to the case that appears on subjects of transitive clauses. In some cases, however, I appealed to a formal notion of transitivity to explain why ergative case did not appear (such as in antipassive ditransitives). I actually believe that this is not the right way to go, and one must instead construct a theory of case that explains why it would change the way it does in both the passive and the antipassive.

Let us consider all of the phenomena listed above that seem to involve changes in structural case. These were the passive, the antipassive, raising to subject, and raising to object (and noun incorporation). I argued above that A-movement is not the relevant factor in these alternations. What is? What do they all have in common? I said above that two other changes in the passive were a change in grammatical function, from object to subject; and a change in the verb's valence, with another argument being removed. A change in grammatical function does not seem to be relevant, since subject-to-subject raising and the antipassive do not involve a change in grammatical function (unless, again, one believes that subjects of transitives and subjects of intransitives are distinct grammatical functions). Is a change in the selecting verb's valence relevant? Not in the case of subject-to-subject raising. Neither verb changes its valence: the higher verb selects only a clause, in most theories of raising to subject, and the lower verb is still transitive. The raised nominal raises into a non-selected position.

One way of looking at all of these changes as similar is in the transitivity *of the verb that assigns case to the nominal*. In the passive and the antipassive (and in noun incorporation), the verb changes from transitive to intransitive. In raising to subject, the nominal receives case not from its selecting verb, but from a verb that is formally intransitive, taking only a clausal argument. The same holds in raising to object.

If this is correct, descriptively, transitivity *is* the relevant factor. What matters is whether the verb that assigns case is transitive or not (with provisos for Split-S languages). We can now take this as a descriptive generalization, and see how well existing theories capture it. I believe that existing theories fall into two categories, both of which, it seems to me, capture it equally well, and both of which have problems.

The first category locates case assignment in designated functional projections, like the theory of Bobaljik (1993) described above. In a theory like this, the functional projections in transitive and intransitive clauses differ. Actives and passives/antipassives will differ; and in undergoing raising to subject or object, a nominal will move into a new functional projection and be assigned a different case (possibly overwriting a previously assigned case, as in the theory of Bejar and Massam 1999). Such a theory is able to capture the facts, then.

The other category is what has been referred to as the *Dependent Case* theory (Marantz 1991, Bittner and Hale 1996b; cf. Yip, Maling, and Jackendoff 1987), where case is determined by the presence of a *case competitor*. In this type of theory, nominative/absolutive is the unmarked case, while ergative and accusative are only assigned in opposition to a nominative. If there is only one argument of a predicate, it will receive the unmarked nominative/absolutive. If there are two arguments, one will receive the marked case, ergative or accusative, and the other will receive nominative/absolutive. Ergative seems to be assigned to the higher of two co-arguments, while accusative is assigned to the lower (Marantz 1991). This theory can capture the facts, too: in a passive or antipassive, one argument is demoted to an oblique, leaving only one argument to receive the default nominative/absolutive; in raising to subject or object, the nominal raises into a clause where no case competitor is present, and so it will receive nominative/absolutive.

Both theories face some difficulties. One is Split-S languages like Basque, where ergative case appears on certain subjects of intransitive verbs. Both types of theories have responded by treating these verbs as underlyingly transitive (see references above). Another problem comes from three-way ergative-nominative-accusative languages like Djapu, where ergative and accusative case can be assigned in the same clause, and both are distinct from nominative:

(38)   Djapu (Morphy 1983, as cited in Legate to appear, (40))

   a.   mak   rlinygu-n   galka-y'   ba:pa-'ngali-n   dharpu-ngal
        maybe already-IM sorcerer-ERG father-KinProp-ACC spear-Perf
        'Maybe a sorcerer has already speared your father.'

b. Ngarritj   nha:-ma   wa:yin-wa:yin-gu
    Ngarritj.NOM see-UNM animal-animal-DAT
    'Ngarritj is looking for animal(s).'

The designated projection theory would have to posit three distinct functional projections, rather than two, in such languages, or come up with some other way of dealing with them. A simpler solution seems available to the dependent case theory. In this theory, languages have to choose between two case principles: assigning ergative to the higher of two co-arguments, or accusative to the lower. What would stop a language from doing both simultaneously, in certain contexts? The choice is obviously not language-wide, since many languages are ergative in one context and accusative in another. We might expect both to happen in certain contexts (or even every context), giving us three-way languages like Djapu.

It is not my purpose here to construct a theory of case, so I will end the paper at this point. Both types of theories seem to me to be able to capture the facts, and both face some difficulties (which are not insuperable). What *is* important is that ergative case be treated as a structural case, on a par with accusative case, and that alternations like the antipassive and the passive be treated as parallel. Theories that treat ergative case as non-structural must be rejected.

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