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Ergative Subjects*

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The most striking feature of ergative systems is the fact that subjects of transitive and intransitive verbs behave differently for purposes of case and agreement. Why should this be so? One possible answer is that the transitivity of the verb directly affects how its subject behaves syntactically. That is, transitive and intransitive subjects have differing D-structure positions (Marantz 1984, B. Levin 1983), or conditions on case assignment force intransitive subjects to bear a particular case (Bobaljik 1993, Campana 1992, Chomsky 1993, Laka 1993, J. Levin & Massam 1985).[1] Alternatively, the differential behaviour of subjects is not directly determined by the transitivity of the verb: an independent syntactic requirement, such as the Extended Projection Principle (EPP, Chomsky 1982), causes subjects to behave differently in ergative systems. This paper argues for the second of these two possibilities.

If the transitivity of the verb is directly responsible for the fact that transitive and intransitive subjects behave differently, then we expect the two kinds of subjects to *always* behave differently for case and agreement. On the other hand, if the EPP is responsible for the contrast between transitive and intransitive subjects, then we allow for intransitive subjects to behave just like transitive subjects — provided that the EPP can be taken care of by another element, such as a non-argument. In other words, we allow for the possibility of *variability* in the behaviour of intransitive subjects. In section 1 I show that the Papuan language Yimas (Foley 1991) provides an example of an ergative system with precisely this kind of variability: when the EPP is satisfied by a non-argument, *all* subjects are marked by ergative agreement.

Section 2 shows how the variable marking of intransitive subjects, and an ergative pattern in which absolutive is assigned higher than ergative, follows from a theory of economy of derivation. Section 3 gives evidence from the distribution of anti-agreement effects in subject extraction in Yimas, which support the idea that arguments may A-bar move for Case as a last resort.

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[1] Bobaljik, Chomsky and Laka assume that in an intransitive clause a setting of the *Obligatory Case Parameter* dictates the case of the subject. Campana assumes a similar requirement, which is not parameterized.

In section 4 I discuss the consequences of intransitive ergative subjects in Yimas for the analysis of subject-oriented phenomena in ergative languages. Phenomena which treat subjects as a natural class are widely attested in ergative languages; most of the examples in the literature involve binding-related phenomena. It has been claimed that subjects are picked out as a natural class only by virtue of sharing the same VP-internal position. The subject property from Yimas that I'm highlighting is a Case-related phenomenon, which implicates a position outside VP. This suggests a different account of which positions are targeted by subject-oriented phenomena.

1. Ergativity and the Extended Projection Principle

The aim of this section is to show that the appearance of an ergative agreement system in Yimas is due to the effects of the Extended Projection Principle. Intransitive subjects are normally marked absolutive, satisfying the demands of the EPP. However, when the EPP can be independently satisfied, intransitive subjects are not absolutive but ergative — identical to transitive subjects.

Case distinctions are marked by inflectional affixes on the verb in Yimas. Independent nominals are caseless, and they are both liberally ordered and freely omitted. As a result, almost all of the sentences that follow consist of just an inflected verb. Case differences are encoded by different sets of agreement inflections.

Agreement marking for 3rd person arguments follows a classic ergative-absolutive pattern. Objects of transitive verbs and subjects of intransitive verbs are marked identically, by *absolutive* markers (1a-b). There is a separate *ergative* inflectional paradigm for subjects of transitive verbs (1c).

(1) a. **pu-** n- tay
3pl-Abs 3sg-Erg see
'He saw them.'

b. **pu-** wa -t
3pl-Abs go Perf
'They went.'

c. na- **mpu-** tay
3sg-Abs **3pl-Erg** see
'They saw him.'

For our purposes here the most interesting property of Yimas is the fact that a given argument can be marked by different agreement affixes, depending on what other arguments and functional elements are in the clause. For example, a 2nd person subject is marked either nominative or absolutive. The factors governing the choice are given in (2). They appear complicated at first, but they reduce to a simple generalization.

(2) 2nd person subjects are marked:

Nominative - when there is a 3rd person object, marked absolutive.
Absolutive - when the 2nd person subject is the sole argument.
Absolutive - when there is a 1st person object, marked Accusative.

(3) a. na- **n-** tay
3sg-Abs **2sg-Nom** see
'You saw him.'

b. **paNkra-** wa -t
2pc-Abs go Perf
'You few (paucal[2]) went.'

c. **ma-** Na- tay
2sg-Abs 1sg-Acc see
'You saw me.'

This alternation is explained by the general requirement that any finite verb form in Yimas be marked by absolutive inflection. This requirement overrides other principles of agreement marking. When another argument is marked absolutive, as in (3a), 2nd person subjects are marked by nominative agreement; but in the absence of another absolutive marked argument, 2nd person subjects satisfy the requirement for an absolutive.[3]

(4a-b) shows an alternation due to the same requirement, this time between between ergative and absolutive. (4a) repeats (1a), and shows that a 3rd person subject is marked ergative when there is a 3rd person object marked absolutive. In (4b), however, the object is 2nd person, and therefore marked accusative. In this case the 3rd person subject becomes absolutive, in order to make the verb well-formed.

(4) a. pu- **n-** tay
3pl-Abs **3sg-Erg** see
'He saw them.'

b. **na-** nan- tay
3sg-Abs 2sg-Acc see
'He saw you.'

I take the requirement for an absolutive agreement marker to be the reflex in Yimas of a version of the Extended Projection Principle, which

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[2]Yimas distinguishes 4 different numbers: singular, dual, plural, and paucal, which generally refers to groups of 3-7.

[3]See Phillips (1993, to appear) for discussion of the person-based ergative split in Yimas. Roughly, 1st and 2nd person arguments may be Case-licensed through incorporating into the verb.

requires that the head $Agr1^0$ be governed at S-structure. I assume that Agr1P is the XP immediately below CP, and that Agr1 is associated with absolutive case. Therefore, movement of a *pro* argument to the specifier of Agr1P both satisfies the EPP and triggers the realization of absolutive agreement.

Crucially for the argument being developed, the presence of an absolutive agreement marker is only one of the ways of satisfying the EPP in Yimas. The EPP is also satisfied when the verb is prefixed by one of a small class of prefixes, which I assume to be of category C^0. I assume that these become attached to the verb root and its inflectional material by head movement of V^0 to C^0 via $Agr2^0$ and $Agr1^0$.

(5) Complementizer prefixes:

m-	relativizing complementizer
ta-	negation
ant-	modal - 'potential'
ka-	modal - 'likely'

(6a-b) shows that these prefixes have the same effect on subject marking as the presence of a 3rd person object: the 2nd person intransitive subject is marked nominative, and the 3rd person transitive subject is marked ergative.

(6) a. ta- **nan**- wa -r -um
Neg **2pl-Nom** go Perf PL
'You all didn't go.'

b. ka- **mpu**- Na- tput-n
LIKE **3pl-Erg** 1sg-Acc hit Pres
'They are going to hit me.'

Although the Complementizer prefixes do away with the need for an absolutive marker, they are *not* in competition with absolutive agreement. (7) shows that a Complementizer prefix and an absolutive agreement marker may cooccur. This also shows that what I have been calling absolutive case is not just a word-initial allomorph of the normal agreement markers.

(7) ta- **pu**- n- tpul-c -um
Neg **3Abs**[4] 3sg-Erg hit Perf PL
'He didn't hit them.'

With these preliminaries in mind, we can now ask the main question of this section: what happens to the ergative agreement system in Yimas when

[4] *pu-* is glossed as a number neutral form here, although it is normally the 3rd person absolutive plural marker. This is because *pu-* can be used for all numbers in negated verbs. In these cases, the number suffix disambiguates the number of the object.

the effects of the EPP are controlled for? In other words, does the ergative system arise *because of* the EPP?

We have already seen what happens to 3rd person *transitive* subjects and objects when the EPP is independently satisfied. (6b) and (7) show that transitive subjects are ergative, and objects are absolutive. All that is missing are the intransitive subjects.

To test how intransitive 3rd person subjects are marked when the EPP is independently satisfied, we need to look at examples of intransitive verbs with complementizer prefixes. Unfortunately, this test is not easy to apply, due to the following confound: most of the complementizer prefixes are part of a complex C^0, containing an agreement suffix, such as the suffix *-um* in (7), which is in 'competition' with Absolutive and Ergative prefixes. This agreement suffix agrees in number with the leftmost agreement prefix, which in turn leads to the deletion of that prefix, if it is Absolutive or Ergative.[5] Nevertheless, we can show for each complementizer prefix, that it causes intransitive subjects to be treated as ergative rather than as absolutive. This confirms the claim that the ergative agreement system is an artifact of the EPP.

a. *ka-*

ka- is the one complementizer prefix which does not cause the deletion of ergative or absolutive prefixes: this is because is does not introduce an agreeing suffix. Hence it provides the clearest test of how the EPP affects intransitive subjects. (8) shows an intransitive subject marked ergative following *ka-*.

(8) balus-ˆan ka- **Nkl**- ya -ka -arm -n
airplane-Obl[6] LIKE **3pl-Erg** come Seq board Pres
'Those few will board the plane now.'

b. *ta-/ant-*

With these complementizer prefixes it is impossible to see directly whether an intransitive subject is marked ergative or absolutive, due to competition with the complementizer agreement suffixes which these prefixes introduce. However, the form of the complementizer agreement

[5]Apart from combinations with *ka-*, which never involve deletion of agreement prefixes, the only exceptions involve combinations of the negative marker *ta-* with 3rd person agreement markers: the agreement prefixes are not deleted, rather they are replaced by the number neutral form *pu-*. See Phillips (1993, to appear) for discussion of why complementizer agreement competes with absolutive and ergative agreement.

[6]The oblique marker *-ˆan* is the only case-marker found on independent nominals in Yimas. Nominals marked with *-ˆan* are never associated with agreement inflections on the verb.

suffixes used with instransitive subjects indicates that they are being treated as ergatives.

For most numbers, the complementizer agreement suffixes do not encode case differences, i.e. the form of agreement for absolutive dual is identical to the form for ergative dual, as in (9).

(9) a. ta- mpu- tpul -c **-rm**
Neg 3pl-Erg hit Perf **DL**
'They didn't hit those two.'

b. ta- pu- nan- tpul-c **-rm**
Neg 3Erg 2pl-Acc see Perf **DL**
'Those two didn't hit you.'

Case differences *are* encoded for singulars, however: singular transitive objects (absolutive) are marked *-ak*, whereas singular transitive subjects (ergative) are marked by zero agreement (10a-b). In this respect, the intransitive subject in (10c) patterns just like the transitive subject in (10b).

(10) a. ta- Ø- mpu- tay -c **-ak** *transitive object*
NEG $Ø_{3sg\text{-}Abs}$ 3pl-Erg see perf SING
'They didn't see him.'

b. ta- Ø- kra- tpul **-Ø** *transitive subject*
NEG $Ø_{3sg\text{-}Erg}$ 1pl-Acc hit SING
'He didn't hit us.'

c. anan- Ø- mal **-Ø** *intransitive subject*
POSS 3 die SING
'He almost died.'

This shows that, although not overtly marked, intransitive subjects behave as ergatives when *ta-* or *ant-* satisfies the EPP.[7]

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[7]It might be objected that the suffixes are encoding a thematic contrast rather than a case contrast in (10). This hypothesis is reinforced by the observation that singular 1st person subjects (i.e. nominatives) are also marked by a zero agreement suffix. However, if the suffixes reflect thematic distinctions, then we might expect agreement with a 2nd person object to be identical to that with a 3rd person object. (i) shows that singular 2nd person objects are also marked by a zero agreement suffix. Therefore, the suffix *-ak* is restricted to absolutives.

i. ipa ta- mpan- tpul -Ø
1pl Neg 1ag/2sg-Acc hit **SG**
'We didn't hit you.'

[The prefix *(ka)mpan* is a portmanteau used for combinations of a 1st person agent (any number) with a 2nd person singular patient. The free pronoun in (i) shows that the agent is plural, and therefore that zero agreement is with the object. Agreement with the plural subject would be *-um*.]

c. *m-*

The relative complementizer *m-* also introduces an agreeing suffix, which leads to deletion of absolutive or ergative markers in the same way as *ta-* and *ant-* do. So again we cannot directly see the form of intransitive subject agreement. But there is independent evidence that all 3rd person subjects are treated alike when *m-* takes care of the EPP. In this case, the evidence comes from wh-question formation. A 'clefting' strategy is used for extraction of transitive or intransitive subjects (11a-b), but is not required for object extraction (11c). I assume that the clefting strategy, which supplies the C-prefix *m-*, is used as a last resort when there is no potential absolutive marker. Again the parallel between transitive and intransitive subject extraction indicates that 3rd person intransitive subjects are being treated as ergatives.[8]

(11) a. nawm **m**- Ø- kul- cpul -um? *transitive subject*
who-pl Comp $Ø_{3pl\text{-}Erg}$ 2pl-Acc hit PL *question*
'Who hit you all?'

b. nawn **m**- Ø- na- ya -n -Ø? *intransitive subject*
who-sg Comp 3 DEF come Pres SING *question*
'Who is coming?'

c. nawn impa- Ø- tpul? *transitive object question*
who-sg 3sg-Abs $Ø_{3sg\text{-}Erg}$ hit
'Who did he hit?'

Reiterating the main point of this section: 3rd person agreement in Yimas follows an ergative-absolutive system, in which transitive and intransitive subjects are normally marked differently. We asked whether the contrast between transitive and intransitive subjects was a direct consequence of the transitivity of the verb, or whether it is the result of an independent phenomenon. We showed that case alternations in Yimas are explained by the demands of the EPP, and furthermore, that once the EPP is controlled for, transitive and intransitive subjects behave identically. Therefore, ergative case patterns are not directly determined by verb transitivity.

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[8] Again, we need to exclude the possibility that Yimas simply chooses a different question form for subject and object questions, in which case the facts in (11) would not be telling us anything about Case distinctions. However, subject questions do not always require clefting: transitive subject questions in which the object is a 3rd person — providing an absolutive to satisfy the EPP — are not clefts. Therefore, the clefting strategy is not simply a property of subject questions.

i. nawn pu- n- tpul
who-sg 3pl-Abs 3sg-Erg hit
'Who hit them?'

[The lack of anti-agreement in this wh-question is an independent effect, discussed in section 3 below.]

Bobaljik (1993) claims that: "given two structural ... Cases, languages must determine which will be realised on the sole argument of an intransitive clause. ...this is the result of a very simple parameter, the *ObligatoryCaseParameter"* On the contrary, we've seen that there is no 'obligatory Case' in Yimas. This opens up the possibility that grammars in general do not need to include conditions which force a special treatment of intransitive subjects for Case purposes.

However, we have only partly explained the behaviour of subjects in Yimas so far. In transitive clauses, why do objects satisfy the EPP, rather than subjects, in contrast with English? And why are intransitive subjects marked ergative when the EPP is independently satisfied. Put in slightly more leading terms: why do subjects appear to 'prefer' ergative to absolutive? The next section addresses these issues.

2. Deriving Agreement Alternations

I assume a version of the Case theory developed by Shlonsky (1987) and Baker (1991) known as *Generalized Visibility*. The key claim of this approach is that Case licensing is a precondition for interpretation, where 'interpretation' means phonetic interpretation at PF, and semantic interpretation at LF.

(12) *Generalized Visibility*
If X is a potential Case-bearing element, X can be interpreted at level α only if X is Case-marked at level α.

This implies that an expletive element, like *there*, which is overtly realized, but is presumably not interpreted, requires Case licensing only at PF. *pro*, on the other hand, which is interpreted, but not overtly realized, requires Case licensing only at LF.

I also assume that agreement heads are potential Case bearing elements, and following reasoning from Baker (1991), that overt case-bearing heads force nominal arguments to be phonologically null.[9]

If we assume that Spec-head agreement can Case-license one element at a time, then a conflict arises in the situation where both the Specifier and the head require Case-licensing. *Generalized Visibility* offers a solution to this conflict, provided that the argument in the specifier position is *pro*.[10] In such a situation, the agreement head but not *pro* requires Case-licensing

[9]This prevents overt nominals from appearing in A-positions; it does not prevent them from being realized altogether. Both adjunct and A-bar positions are available for overt nominals.

[10]In fact, the specifier could fail to be *pro*, provided that it is some other phonologically null element, eg. wh-trace.

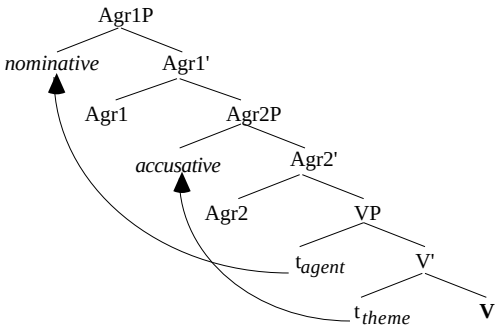
at SS/PF, and *pro*, but not the agreement head, requires Case-licensing at LF.

Since all of the actual arguments of the clause are *pro*, any overt nominal expressions that we see must be coindexed adjuncts. This explains the free ordering and omission of overt nominal expressions in a rich agreement language like Yimas.

Generalized Visibility predicts which elements require Case-licensing, and at which levels, but does not predict *where* arguments will move for Case. I assume that syntactic movement conforms to a relativized notion of economy of derivation, in which the candidate set of operations, from which the shortest is chosen, consists of all operations which immediately satisfy the same requirement. The element which moves may satisfy a requirement of its own, or a requirement on the site which it moves to. So, if an NP requires Case itself, it moves to the closest position which can satisfy its Case requirement. On the other hand, if an agreement head needs a specifier to agree with, the closest available NP to that head is moved to its specifier.[11] This view of economy differs from more familiar versions, in that it assumes no component of greediness (cf. Chomsky 1993).

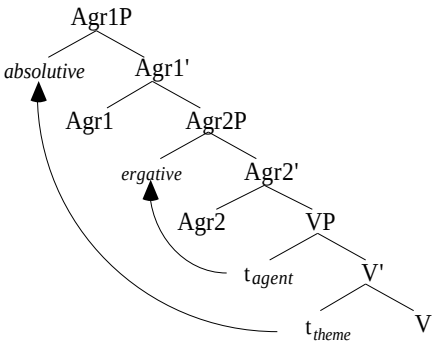
In (13a-b) I combine this version of economy with the assumption that lower elements in tree get the first opportunity to satisfy their requirements, and illustrate the derivations predicted for transitive clauses in a language with overt NP arguments (13a, eg. Icelandic), and a language with *pro* arguments and overt agreement heads (13b, Yimas). Depending on whether movement is driven by XPs or by heads, 'nested' or 'crossing' paths of Case movement result (cf. Murasugi 1992, this volume).

(13) a.



[11] This version of economy owes a lot to ideas in Murasugi (1992).

b.



(13b) shows that in a transitive clause in Yimas, the EPP is automatically satisfied by the object moving to [Spec,Agr2]. This is not the case in an intransitive clause. Economy dictates that the subject move to [Spec,Agr2], and be marked ergative, just as the transitive subject does in (13b); this is only possible, however, when the EPP is independently taken care of (cf. 8, 10c, 11b above). When the EPP is not independently satisfied, the subject is forced to move to [Spec,Agr1], and it is marked by absolutive agreement.

3. Anti-Anti-Agreement

The previous sections set out one argument for the transitive clause structure in (13b), which was based on the assumption that the EPP is a requirement on the head Agr1. In this section I present another argument for the structure in (13b), based on observations of where agreement is and is not permitted in questions. In addition, this provides a reason to assume that XPs move for Case by S-structure in Yimas, contrary to recent proposals of Campana (1992) and Murasugi (1992); finally, Case-motivated movement turns out not to be uniformly A-movement.

One of the most striking features of the wh-questions in (11) is that extracted arguments are not marked by agreement prefixes, as we have come to expect. This phenomenon is known as *anti-agreement*, and is found in subject extraction contexts in many languages with rich subject agreement (cf. Ouhalla 1993). In Yimas, anti-agreement is found with both subject and object extraction, as can be seen in (11a) and (11c), repeated below.

(11) a. nawm **m**- Ø- kul- cpul -um? *subject extraction*
who-pl Comp $Ø_{3pl\text{-}Erg}$ 2pl-Acc hit PL
'Who hit you all?'

c. nawn impa- Ø- tpul? *object extraction*
who-sg 3sg-Abs $Ø_{3sg\text{-}Erg}$ hit
'Who did he hit?'

There is, however, one environment where extraction does not trigger anti-agreement. (14) is a question in which the extracted argument is marked by a normal agreement prefix. The only difference between (11a) and (14) is that the *non*-extracted argument, the object, is 2nd person in (11a), and 3rd person in (14).

(14) nawn pu- n- tpul
who-sg 3pl-Abs 3sg-Erg hit
'Who hit them?'

We might term the unexpected agreement in (14) *anti-anti-agreement*. I'll assume here that this effect is essentially the same as the effect of negation on subject extraction found in some anti-agreement languages, discussed by Ouhalla (1993). Ouhalla observes that in languages in which negation intervenes between subject position and [Spec,CP], it blocks the anti-agreement normally found with subject extraction in the language: Welsh, Breton and Berber show this interaction. On the assumption that negation occupies an A-bar position between IP and CP, anti-anti-agreement is triggered when subject extraction violates *Relativized Minimality*. The pair of examples in (15) come from Breton: (15a) shows anti-agreement with subject extraction; (15b) shows the reappearance of subject agreement in a negated relative.

(15) a. Ar vugale a lenne (*lennent) al levrioù
the children COMP read read-3pl the books
'The children who read the books.'
b. Ar vugale ne (*lenne) lennent ket al levrioù
the children NEG read read-3pl NEG the books
'The children who did not read the books.' (Hendrick 1988)

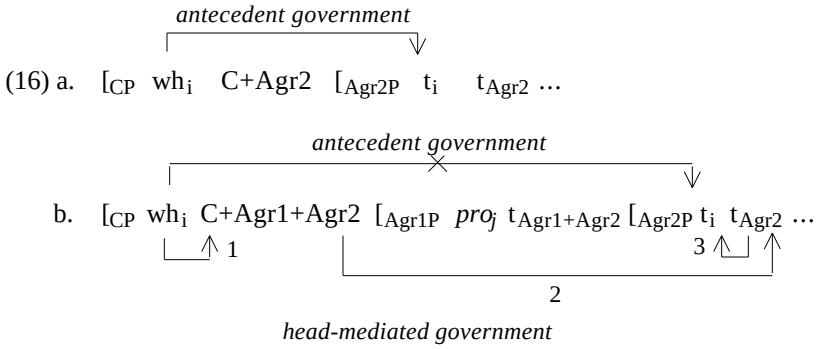
Ouhalla's explanation of anti-agreement focusses on the *A-bar Disjointness Requirement* (ABDR) of Aoun & Li (1990, 1993), which requires roughly that a pronoun must not be bound by the most local A-bar binder. On the assumption that rich agreement licenses *pro*, and that *pro* may be the legitimate tail of an A-bar chain, *pro* cannot be the tail of an A-bar chain that satisfies Minimality: for if *pro* is the tail of such a chain, the ABDR will be violated. Impoverishing agreement is a way of preventing the licensing of *pro* in such contexts, and of thereby ensuring that the ABDR is satisfied. Rich subject agreement becomes possible in negated sentences like (15b), according to Ouhalla, because negation is the closest A-bar binder of *pro*.

I suspect that the effects are incorrectly attributed to the ABDR. First, Aoun & Li (1990, 1993) argue that the ABDR must hold only at LF, since in Chinese an illicit sequence **quantifier$_i$...pronoun$_i$* is improved by the insertion of a wh-operator which does not 'shield' the pronoun until LF: *quantifier$_i$ ... pronoun$_i$ ... wh-phrase$_j$*. Meanwhile, related facts force Ouhalla

to assume that the ABDR holds at S-structure: wh-in-situ appears not to trigger anti-agreement effects. This makes it difficult to account for anti-agreement effects and Chinese pronoun binding effects using the same principle.

Second, Ouhalla claims that anti-agreement involves *impoverishing* subject agreement in order to avoid licensing *pro*. This seems to be descriptively incorrect. Yimas, Palauan (Georgopoulos 1991) and the languages cited by Ouhalla *delete* agreement with extracted subjects where at all possible. Default 3rd person singular agreement appears only where tense and agreement are spelled out as a portmanteau, i.e. only in cases where it is impossible to delete agreement without also deleting tense. If the function of anti-agreement is merely to avoid the licensing of *pro*, as Ouhalla claims, then we should not expect anti-agreement to impose so strong a requirement as complete deletion on agreement morphemes.

As an alternative, I suggest that anti-agreement effects reflect different ways in which A-bar traces can be licensed. Where possible, familiar antecedent government relations hold; but antecedent government fails when an A-bar specifier intervenes. Where antecedent government fails, a head chain may mediate the relation between [Spec,CP] and the extraction site. Each specifier is governed by its head, and the two heads are related by Baker's (1988) *Government Transparency Corollary*, or an analogue. The two ways of licensing A-bar traces are shown in (16a-b): I assume that licensing *via* a head chain is exploited only where normal antecedent government fails (16b: *pro* in Agr1 occupies an A-bar position), due to the extra chain-links involved, which are dispreferred for reasons of representational economy.



But why does the person specification of an argument that is not extracted appear to trigger this effect? In both (11a) and (14), the site of wh-extraction is presumably [Spec,Agr2], but only in (14) does any material intervene between Agr2P and CP — there is an object *pro* in [Spec,Agr1] in (14). For (11a) I assume that the 2nd person object is Case-licensed without needing to exit VP (see Phillips, to appear). If the object in [Spec,Agr1]

occupies an A-bar position, then we predict the same anti-anti-agreement effect found in negated questions in Breton, Welsh or Berber.

Two questions arise at this point: first, why should the object in [Spec,Agr1] be in an A-bar position, given that the same position is generally taken to be an A position in familiar accusative languages? Second, why do we not find anti-anti-agreement in the object question (11c), which also seems to involve extraction across a filled [Spec,Agr1]?

For a possible reason why objects can only reach [Spec,Agr1] by A-bar movement, we can look to the criticisms of the derivation in (13b): Bobaljik (1993) and Chomsky (1993) argue that the 'nested paths' derivation of a transitive clause in (13b) is impossible, since no pattern of A-movements will yield it, given the conditions on movement which they assume[12]. We might in fact assume that Bobaljik and Chomsky are correct in their claim that objects cannot A-move to [Spec,Agr1] across a subject, but incorrect in their assumption that impossible A-movement entails impossible movement for Case. A-bar movement for Case is also possible, but only as a last resort, as argued in Miyagawa (1993)[13].

Also, assuming something akin to Chomsky's (1993) conditions on A-movement offers an answer to the second question: why does extraction across a subject allow anti-agreement (11c)), whereas extraction across an object does not (14)? Objects can only reach [Spec,Agr1] by A-bar movement, which is why they induce Relativized Minimality effects for extraction, including anti-anti-agreement. Subjects can reach [Spec,Agr1] by A-movement, which is why they do not interfere with A-bar movement across them, and hence why they do not interfere with anti-agreement. In effect, what I am claiming here is that [Spec,Agr1P] in Yimas is mixed, in just the same way as Diesing has claimed for Yiddish (Diesing 1990).

A further consequence of the intervention effect diagnosed in (14) is that the Case-movements shown in (13b) must take place by S-structure, and cannot be delayed until LF. This conclusion is based on an observation of Ouhalla, who notices that anti-agreement effects are not found in languages which lack overt wh-movement in subject questions. Therefore, he argues, anti-agreement effects must reflect S-structure configurations. If anti-agreement effects reflected LF configurations, we would not expect variation in when wh-movement takes place to predict variation in the presence of anti-agreement effects.

The conclusion that objects move to [Spec,Agr1] at S-structure in ergative systems conflicts with claims of Campana (1992) and Murasugi

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[12] They assume that no A-movement may cross two intervening A-specifiers.

[13] Miyagawa (1993) shows that although there is a scope interaction in Japanese between a head noun and the NP which it exceptionally Case marks genitive, the interaction disappears when a third nominal intervenes and is in an A-position. Miyagawa attributes the loss of scope interaction to the fact that the genitive NP is forced to A-bar move for case in the case with an intervening A-position.

(1992), who both assume that at least Case-movement of objects must be delayed until LF.

4. Subject Properties

In the remainder of the paper I discuss possible cross-linguistic implications of the following findings about Yimas from sections 1 and 2:

i. Transitive and intransitive subjects may occupy the same case position (Spec,Agr2) in an apparently 'ergative' system.
ii. In transitive clauses, objects are higher than subjects at S-structure.
iii. [Spec,Agr1] is a 'mixed' position.

In an important 1976 paper, Anderson points out that despite the differences in case and agreement inflection between ergative and accusative languages, there are striking parallels across the two language types in binding phenomena: in transitive clauses subjects can bind object anaphors, but objects cannot bind subjects.[14]

Anderson's response to the contrasting natural classes of arguments picked out by case and binding was to assume that the binding phenomena reflect true syntactic configurations, and that the case phenomena are merely morphological in nature.

Faced with various kinds of evidence that the distribution of Case-marking does reflect syntactic properties, and armed with a wider range of syntactic positions, recent authors such as Campana (1992) and Murasugi (1992) have claimed that Anderson's contrasts arise because different syntactic phenomena are sensitive to different classes of syntactic positions. Case sensitive phenomena involve Case positions like [Spec,Agr1] and [Spec,Agr2] in (13b) above. Subject oriented phenomena, on the other hand, such as binding, involve primarily thematic positions inside VP.

Neither Campana nor Murasugi stipulate directly that different phenomena look at different syntactic positions. Instead, they achieve the contrast by assuming that different classes of phenomena are sensitive to different syntactic levels. Binding conditions crucially apply at S-structure, at which point objects are still inside VP, and hence asymmetrically c-commanded by subjects.[15] This derives Anderson's observations about binding in ergative languages. Case-sensitive phenomena refer to LF

[14] Examples are Basque (Control: Anderson 1976); West Greenlandic Inuit (Bittner 1994: Control, Reflexive & Pronominal Binding, Switch Reference); Abkhaz (Murasugi 1992: Reflexive Binding).

[15] This is not strictly correct for Murasugi's theory: she assumes that subjects do raise to [Spec,Agr2] at S-structure, and only objects remain in situ. However this difference is not important to the points that follow.

structures, in which objects now asymmetrically c-command subjects. We may term these approaches to Anderson's Problem 'separation' approaches.

The findings about Yimas listed in (i-iii) above challenge Campana and Murasugi's assumptions in two respects. First, we found evidence in section 2 that objects move to [Spec,Agr1] by S-structure. Second, evidence from sections 1 and 2 shows that transitive and intransitive subjects have more in common than just originating in [Spec,VP]: section 1 showed that both transitive and intransitive subjects may occupy [Spec,Agr2]; a consequence of section 2 is that even when objects move across subjects for Case, the highest A-position in a clause will always be filled by a subject. We may then assume that subject-oriented phenomena target the highest A-position in a clause.

Taken together, these findings remove the need for a separation approach to Anderson's Problem. The binding facts noticed by Anderson follow straightforwardly from the standard assumption from accusative languages, that binding conditions apply to all and only A-positions.

5. Conclusions

This paper has discussed the implications of a *subject property* rather different from most examples of subject properties in the ergativity literature.

First, in Yimas it is possible to control for the effects of the Extended Projection Principle on agreement marking patterns, and it can be shown that it is the EPP that is responsible for the ergative agreement system. When the EPP is independently satisfied, all subjects are marked ergative. This has the consequence that grammars do not need to include conditions which apply specifically to intransitive verbs, or requirements that a given case be obligatorily assigned — this conclusion diverges from a good deal of recent literature on ergativity.

Second, alternations in agreement marking for subjects due to the EPP motivate an approach to Case movement in ergative and accusative systems based on a greed-free notion of economy of movement.

Third, alternations in agreement marking for extracted subjects, due to the person of the object, lend support to the assumption that in ergative systems objects are case-marked (a) higher than subjects, and (b) in an A-bar position.

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