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## **Aspect Splits As Contextual Faithfulness**

Ellen Woolford

University of Massachusetts

The idea that families of constraints in Optimality Theory may include versions formulated to hold only in a particular context is familiar in work in phonology (e.g. positional faithfulness, Beckman 1998), although there is disagreement as to whether markedness constraints, faithfulness constraints or both can be contextually restricted. This paper will show that there are phenomena in syntax, known in the typological literature as ‘aspect splits’, which motivate contextually restricted versions of constraints established in the literature in context free form.

In an aspect split, a particular Case, preposition, or agreement form is restricted to, or prohibited in, the perfective aspect. This paper will focus on three diverse examples of aspect splits from unrelated languages. The best known example occurs in Hindi and related languages where ergative Case is restricted to the perfective aspect. The interaction of this aspect split with another split in the related language Nepali provides evidence that ergative Case is preserved in perfective contexts (rather than prohibited in imperfective contexts). That is, the Hindi aspect split requires contextual faithfulness rather than contextual markedness.

Although aspect splits are typically discussed in connection with ergativity in the typological literature, the second example of an aspect split does not involve ergativity at all. In Palauan, preposition insertion is prohibited in the perfective aspect, motivating either a contextually restricted DEP constraint, or a contextually restricted markedness constraint, \*P. The Palauan situation is interesting because the aspect split involves an aspect driven choice between two possible ‘repairs’ to something like coda conditions or onset faithfulness in syntax.

The third aspect split we will consider occurs in Yucatec Maya and some related languages, where one agreement series (the Mayan Set ‘A’ series) is prohibited in the perfective aspect in intransitive clauses. (This prohibition does not hold in transitive clauses because of the overriding need to cross-reference both arguments with distinct forms.) The interaction of this aspect split with a negative split in the related language Chontal reduces the distribution of the Set A series to positive intransitives in the perfective aspect. This distribution is produced by the additive effect of constraints prohibiting Set A forms in negative and perfective contexts. Although this overlapping pattern can be produced with two contextually restricted markedness constraints,

contextually restricted DEP constraints have the same effect here, under the standard assumption that no agreement forms are present in the input to syntax.

Turning now from the formal to the functional, contextual faithfulness in phonology is argued by Beckman 1998 to serve the function of maintaining contrasts in contexts where contrasts are easier to perceive: contexts that are phonetically or psychologically prominent. I suggest a different primary functional motivation for these aspect splits in syntax, but one which may also be relevant for phonology: these contextual splits help identify the context itself, rather than just the features of elements within that context.

The idea is that the primary function of an aspect split is to provide a cheap way of (redundantly) marking aspect without adding a morpheme. By blocking the use of some Case, agreement or other morpheme in one context where it would otherwise be expected to occur, syntax can provide information about aspect. I will refer to this phenomenon as *Parasitic Marking*. The intuitive idea behind Parasitic Marking can be seen in the method that boys often use to mark team membership when they play informally without uniforms. This method is called ‘shirts and skins’. The boys on one team remove their shirts, while the boys on the other team keep their shirts on. In this way, the presence of an ordinary shirt comes to mark one team, while its absence marks the other team. Parasitic marking is economical because it never adds to the number of morphemes in the clause; it either reduces them, or substitutes one for another. In some of the situations we will see, parasitic marking is the only mark of aspect in the clause; in other situations, parasitic marking provides redundant marking of aspect.

Although economical, Parasitic Marking typically provides incomplete information. For example, hearing an ergative Case morpheme tells a Hindi speaker that the clause is perfective, but the absence of ergative Case provides no information, at least not until enough of the sentence has been heard to deduce whether an ergative would normally be expected in that context. Despite these informational gaps, parasitic marking is a low-cost method of increasing the informational load in a clause, by manipulating the distribution of independent morphemes that normally have nothing to do with aspect.

There is no standard treatment of aspect splits in syntax. The few analyses that exist in the literature involve diverse language specific stipulations. The goal here is to replace these language specific stipulations with universal, but violable, contextually restricted versions of constraints that are independently motivated in context-free form.

This paper is organized as follows. Section 1 is an overview of the constraints to be used in this paper. Section 2 presents the data and analysis of the aspect split in Hindi. Evidence from an interacting split in Nepali supports a faithfulness approach. Section 3 focuses on Palauan. The situation in Palauan is complex because the aspect split involving preposition insertion turns out to be a split in the choice of ‘repairs’ in response to another contextually restricted constraint governing what looks like the syntactic parallel of coda conditions in phonology. In section 4, we turn to the aspect split in Yucatec Maya. The analysis of this split is complicated by controversy surrounding the

identity of the cross-referencing forms involved in this aspect split, which are traditionally described in neutral terms as Set A and Set B. However, the general form of the solution is the same, regardless of which of these sets is true agreement and which involves (doubling) pronominal clitics functioning as cross-referencing elements. I will present the general solution first, and then discuss two specific versions of that general solution which differ in terms of what the abstract Case system of Yucatec is assumed to be, ergative or not.

## 1. Overview of the Constraints

There is independent motivation for context-free faithfulness constraints that preserve, in syntax, one or more of the lexical/inherent Cases (e.g. dative, ergative) that are licensed in connection with theta role licensing, at the level prior to syntax (that level being Argument Structure or the vP phase) (Woolford 2001, 2006a). These faithfulness constraints are opposed by markedness constraints that prohibit these Cases in syntax (e.g. \*ergative, \*dative). In this paper, we motivate a contextually restricted form of the faithfulness constraint that preserves ergative Case, restricting this preservation to the perfective aspect.

(1) IDENT-<sub>Perfective</sub> (ergative)                      Preserve ergative Case in the perfective aspect.

This constraint is active in Hindi and related languages, as we see in section 2.

Preposition insertion occurs in syntax, but only when needed, e.g. ‘of insertion’ in English (Chomsky 1981). Translating this into OT terms, there is a DEP constraint against (inserting) prepositions in syntax that were not present in the input, DEP (P). Higher ranked constraints can force preposition insertion when it is needed to satisfy those higher ranked constraints. This paper introduces a contextually restricted form of this faithfulness constraint, prohibiting preposition insertion in the perfective aspect:

(2) DEP-<sub>Perfective</sub> (P)                                      No P insertion in the perfective aspect.  
(A preposition in the output must have a  
corresponding preposition in the input.)

This contextually restricted faithfulness constraint will do the job in Palauan; however, we cannot conclude that a contextual faithfulness account is required for Palauan because a contextually restricted markedness constraint prohibiting prepositions in the perfective aspect, \*P/perfective, would also do the job in Palauan if it is ranked below Max (P), the constraint that preserves all base-generated prepositions present in the input. We can only conclude that a contextually restricted faithfulness account is possible for Palauan.

There are context-free markedness constraints prohibiting true agreement (\*agr) and (doubling) pronominal clitics (\*clitic) (Woolford 2003). Because these cross-referencing elements are not present in the input to syntax, faithfulness constraints such as IDENT or MAX have no effect on them. However, DEP constraints do have an effect,



Depending on the ranking of relevant markedness and faithfulness constraints, a language may preserve all instances of ergative Case, some of them, or none of them. In a language that preserves all instances of ergative Case, the faithfulness constraint IDENT (ergative) is ranked above the markedness constraint \*ergative, while the ranking is reversed in a language that preserves no ergative Cases in syntax (Woolford 2001). However, a language may preserve only some ergative Cases, as a ‘last resort’, to avoid violating a Case locality constraint (Woolford 2007). When ergative Case is not preserved in syntax, it is replaced by the least marked structural Case available in the context, usually nominative, as in the imperfective example in (5) above (Woolford 2001).

In this paper, we will see another situation in which only some ergatives are preserved, as a result of a contextually restricted faithfulness constraint. I will argue that the aspectual split in Hindi requires the following contextually restricted faithfulness constraint:

(7) IDENT-<sub>Perfective</sub> (ergative)            Preserve ergative Case in the perfective aspect.

This constraint will produce the observed distribution of ergative Case in syntax under the following constraint ranking:

(8) Hindi constraint ranking

IDENT-<sub>Perfective</sub> (ergative) >> \*ergative >> IDENT (ergative)

This contextually restricted faithfulness constraint eliminates any candidate that does not preserve ergative Case from the input:

(9) An external argument in the perfective aspect in Hindi

DP-ergative (perfective)	IDENT- <sub>Perfective</sub> (ergative)	*ergative	IDENT (ergative)
a. → DP-ergative		*	
b. DP-nominative	*!		*

In the imperfective aspect, the contextually restricted constraint has no effect, and \*ergative eliminates all instances of the ergative Case in syntax.<sup>2</sup>

(10) An external argument in the imperfective aspect in Hindi

DP-ergative (imperfective)	IDENT- <sub>Perfective</sub> (ergative)	*ergative	IDENT (ergative)
a. DP-ergative		*!	
b. → DP-nominative			*

<sup>2</sup> If more than one candidate remains which contains a licensed Case (all Cases must be licensed by a sufficiently local head), markedness constraints such as \*accusative remove all but the least marked of these (Woolford 2001).

Could we get the same result by using a contextually restricted markedness constraint, \*ergative/imperfective, which would eliminate all instances in the ergative Case in the imperfective? No. Evidence against such an approach comes from the more complex pattern in Nepali, described by Butt and Poudel (2007). Nepali shares the aspectual split just described for Hindi, but Nepali also preserves ergative Case in the imperfect aspect when the predicate is individual-level (as opposed to stage-level). Butt and Poudel (2007) illustrate this additional split with the following examples. In (11), the fact that Ram knows English is a property of Ram (individual-level); it is not confined to a particular stage of time. Here Ram takes ergative Case even though the aspect is imperfective.

- (11) Raam=le (#aajaa) angreji jaan-da-cha.  
 Ram=Erg today English know-Impf-NonPast.M.3.Sg  
 ‘Ram knows English (#today).’ (Individual-Level)

In contrast, the event of Ram speaking in (12) will occur in one particular stage of time (stage-level). Here Ram does not take ergative Case.

- (12) Raam (aajaa) angreji bol-da-cha.  
 Ram today English speak-Impf-NonPast.M.3.Sg  
 ‘Ram will speak English (today).’ (Stage-Level) (Butt and Poudel 2007 (16))

This Nepali data is relevant to the question of whether a contextually restricted markedness constraint prohibiting ergative Case in the imperfect aspect would produce the right result. It would not. The markedness constraint, \*ergative/imperfective, would eliminate all instances of the ergative in the imperfective aspect, including example (11). Adding another contextually restricted markedness constraint would not help, because it could only further reduce the contexts in which ergative occurs. To get the necessary additive effect for these contexts, we need the contextually restricted faithfulness constraint formulated above, which only says that ergative Case will occur in the perfective; it says nothing about what happens in the imperfective. If another contextually restricted faithfulness constraint is also ranked above \*ergative, it will add another context in which ergative Case is also preserved, and this additive effect is what we need to account for the Nepali pattern.

I maintain the restrictive assumption that inherent Case licensing in the input to syntax (Argument Structure or the vP phase) is universally fixed, with all differences in Case patterns cross-linguistically being the result of things that happen in syntax.<sup>3</sup> However, we should ask whether we could, instead, account for the aspect split by restricting the initial licensing of ergative Case to the perfective aspect (e.g. Davison 2004). Such an approach would be required under the standard pre-OT view that once a Case has been licensed on an argument, it is frozen on that argument (i.e. inviolable faithfulness). However, the Nepali pattern provides an argument against such an

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<sup>3</sup> Languages may differ as to which particular verbs lexically select for a lexical Case, and which lexical Case they select.







concern us here, so for simplicity, I will formulate them as contextual markedness constraints (paralleling coda constraints)  $*[+human]/VP$  and  $*[+individuated]/VP$ . We need to rank these above the constraints that prohibit the two possible repairs ( $*t$  and DEP(P)).

(20)  $*[+human]/VP, *[+indiv]/VP, DEP-perfective (P) \gg *t \gg DEP (P)$

Let us look at some tableaux to see how these constraints, in this ranking, produce the Palauan patterns. Let us first look at what happens with a human object in the perfective aspect. This object is prohibited from simply remaining in the VP by the high ranking constraint  $*[+human]/VP$ . This excludes candidate (a). The ‘repair’ in candidate (c), burying the object inside the protective layer of a PP, is excluded in the perfective aspect by the contextually restricted DEP constraint. This leaves the candidate in (b), where the object has moved out of the VP, as the winner. (Object movement creates a structure that enables/requires clitic doubling, for reasons that do not concern us here.)

(21) Pattern for human objects in the perfective aspect

input: ... V DP [+human]	$*[+human]/VP$ $*[+indiv]/VP$	DEP-Perf (P)	$*t$	DEP (P)
a. ... V DP	*!			
b. →... DP V-cl t			*	
c. ... V [P DP]		*!		*

The same scenario plays out with an individuated object in the perfective. Now let us turn to what happens to human objects in imperfective clauses. Here again, candidate (a) violates  $*[+human]/VP$  and is eliminated. Since the aspect is imperfective, DEP-perf (P) has no effect. The decision is now made by  $*t$ , ruling out candidate (b) where the object moved out of the VP. This leaves candidate (c), with preposition insertion, as the winner.

(22) Pattern for human objects in the imperfective aspect

input: ... V DP [+human]	$*[+human]/VP$ $*[+indiv]/VP^6$	DEP-Perf (P)	$*t$	DEP (P)
a. ... [V DP]	*!			
b. ... DP [V-cl t]			*!	
c. → ... [V [P DP]]				*

When the features of the object are neither human nor individuated, candidate (a) wins. Such features do not violate  $*[+human]/VP$  nor  $*[+individuated]/VP$ , so candidate (a) violates none of these constraints. Candidates (b) and (c), with movement and P insertion, are eliminated by the markedness constraints that prohibit traces and inserted prepositions.

<sup>6</sup> The proper formulation of the context of these ‘coda-like’ constraints must not extend to the region inside a PP which is itself inside a VP. Formulating the context as the local domain of a lexical head could accomplish this, under the assumption that P is a functional head.

(23) Pattern for [-human], [-individuated] objects

input: ... V DP [-hum, -ind]	*[+human]/VP *[+individ]/VP	DEP-Perf (P)	*t	DEP (P)
a. → ... [V DP]				
b. ... DP [V-cl t]			*!	
c. ... [V [P DP]]		(*!, in perf)		*!

We have seen how the Palauan aspect split can be analyzed with a contextually restricted faithfulness constraint. The question remains of whether there is an alternative account involving only contextually restricted markedness. We can rule out replacing DEP-Perf(P) in the above account with a markedness constraint, \*t/[-perfective], if contexts in such constraints can only refer to [+perfective], but not [-perfective], as appears to be true for both Hindi and Yucatec. However, it does not appear that we can rule out an account using the contextually restricted markedness constraint \*P/perfective, because this would do the job in Palauan as long as it is ranked below the constraint that preserves all base-generated prepositions present in the input, Max (P). Thus for Palauan, we can only show that a contextually restricted faithfulness account is possible.

4. Yucatec Maya: an aspect split involving agreement

The third type of aspect split to be discussed in this paper occurs in Yucatec where aspect governs the selection of which of two series of cross-referencing elements is used in intransitive clauses. In the perfective aspect, all intransitive subjects are cross-referenced by forms from the series that is traditionally labeled ‘Set B’. However, in the imperfective aspect, the same verbs take forms from ‘Set A’ (Nida and Romero 1950, Bricker 1981, Krämer and Wunderlich 1999, Bohnemeyer 2004).

In the perfective examples below, the Set B forms are suffixed to the verbal complex, following the aspect morpheme (if present/overt).

(24) a. H- k’uč-ø-eč [perfective aspect]  
 compl-arrive-perfective-B2<sup>nd</sup>  
 ‘You arrived.’ (Bricker 1981 (4))

b. H meyah-n-ah-en  
 compl work-N-perf-B1<sup>st</sup>  
 ‘I have worked.’ (Krämer and Wunderlich 1999 (1d),  
 from Bricker and Yah 1981)

In the examples in the imperfective aspect below, the Set A forms precede the verb, attaching to verb or to the preceding head.

(25) a. Táan in-k’uč-ul. [imperfective aspect]  
 dur A1<sup>st</sup>-arrive-imperfective  
 ‘I am arriving’ (Bricker 1981 (4))



effect as a markedness constraint. A DEP constraint will prohibits any element in syntax that was not present at the previous level. Thus, it is also possible to formulate a general solution to the Yucatec aspect split using contextual faithfulness:

(29) General Solution to the Mayan Aspect Split, using contextual faithfulness

$$\text{DEP-Perfective (Set A)} \gg * \text{Set B} \gg * \text{Set A}$$

Adding a higher constraint requiring that all arguments be cross-referenced (XRef in Woolford 2003)<sup>8</sup>, and assuming that Set A and Set B are the only cross-referencing elements available, the contextually restricted DEP constraint will prohibit Set A forms in the perfective aspect, leaving Set B as the only choice in the perfective.

(30) Intransitives in the perfective aspect

input:	V	S	XRef	DEP-Perf (Set A)	*Set B	*Set A
a.	V	S	*!			
b.	Set A	V S		*!		*
c. →	V Set B	S			*	

In the imperfective, where this contextually restricted DEP constraint does not apply, the context free markedness constraint \*Set B makes the decision, ruling out candidate (c) with a Set B form, so that the only choice left is candidate (b) with a Set A cross-referencing form.

(31) Intransitives in the imperfective aspect

input:	V	S	XRef	DEP-Perf (Set A)	*Set B	*Set A
a.	V	S	*!			
b. →	Set A	V S				*
c.	V Set B	S			*!	

4.2 Chontal: an interaction negative split

The related language Chontal provides evidence against an alternate version of this solution in which a contextually restricted constraint would prohibit Set B forms in the imperfective. Chontal manifests the same aspect split described above for Yucatec, but has an additional split between positive and negative clauses, prohibiting Set A forms in negative intransitives (Knowles-Berry 1987). The result of these two, overlapping prohibitions against using Set A forms is that, for intransitive clauses, Set A forms are limited to positive clauses in the imperfective aspect, as illustrated in the chart below:

<sup>8</sup>The XRef constraint that requires that arguments be cross-referenced (with true agreement or a (doubling) pronominal clitic) is similar to the AGREE-CASE constraint of Legendre 1999.

(32) The Distribution of Chontal Cross-Referencing Forms

	Positive	Negative
Perfective	Set B	Set B
Imperfective	Set A	Set B

We see this Chontal negative split in the following imperfective examples, where the Set A form is used in the positive, while the Set B form is used in the negative:<sup>9</sup>

(33) Ki t-e. [Chontal]  
 1<sup>st</sup>A come-impf  
 ‘I come.’ (Knowles-Berry 1987 (67))

(34) Mač ʔu t-on.  
 neg pt come-1<sup>st</sup>B  
 ‘I don’t come.’ (Knowles-Berry 1987 (68))

As in Yucatec, Set B forms are always used in intransitives in the perfective, regardless of whether the clause is positive or negative.

The pattern of overlap in Chontal shown in the chart above tells us that the effects of two prohibitions against Set A have been added together. This Chontal pattern is produced there is either a contextually restricted markedness constraint, \*Set A/neg, or a contextually restricted faithfulness constraint, DEP<sub>-Neg</sub> (Set A), ranked somewhere above \*B. The contextually restricted constraint prohibiting Set A in the negative eliminates candidate (b), leaving candidate (c) with a Set B form as the winner.

(35) Chontal intransitives (negative, imperfective aspect)

input: V S	XRef	DEP <sub>-Perf</sub> (Set A)	DEP <sub>-Neg</sub> (Set A)	*Set B	*Set A
a. V S	*!				
b. Set A V S			*!		*
c. → V Set B S				*	

If, instead, we constructed an alternate solution with a constraint prohibiting Set B forms in the imperfective aspect, it would fail for Chontal because Set B forms are used in the imperfective when the clause is negative. This failure is consistent with the assumption that the imperfective aspect cannot be a context in a contextually restricted constraint. Similarly, it is likely that [+negative] can be a context, but not [-negative].

What remains to complete this general solution to the Mayan aspect split is to account for why there is no aspect split (and no negative split) in transitive clauses. The intuitive reason is that transitive clauses require both cross-referencing forms because clauses are limited to one from each set. Exactly how to formally encode this intuition depends on the actual identity of Set A and Set B forms, to which we now turn.

<sup>9</sup> Knowles-Berry (1987) glosses the Set A form as ergative.

In the subsections below, I lay out two more specific versions of this general solution to the Yucatec aspect split, using two different sets of assumptions about the identity of the Set A and Set B forms. The first solution adopts the idea that the abstract Case system of Yucatec is ergative. Under this solution, the Set A forms are pronominal clitics which are not distinguished for morphological Case, while the Set B forms are true agreement cross-referencing nominatives. The second solution is based on the view that the abstract Case system of Mayan languages is actually nominative-accusative. Under that solution, the Set A forms are true agreement cross-referencing nominative subjects, while Set B forms are pronominal clitics which are not distinguished for morphological Case.

### 4.3 Analyzing Yucatec as Ergative

Although there are no overt Case morphemes to show it, the standard assumption is that Yucatec and other Mayan languages have an ergative Case system.<sup>10</sup> In this section, we fill in the identities of Set A and Set B forms in the general solution given above, based on the assumption that the Case system of Yucatec is ergative:

(36) Yucatec Case system (under the ergative assumption)

transitives:    subject-ergative            object-nominative<sup>11</sup>

intransitives:    subject-nominative

For transitives, the identity of the Set A and B cross-referencing forms is essentially the same as in the analysis in Krämer and Wunderlich 1999: the Set A forms are ergative pronominal clitics, and the Set B forms are true agreement, which cross-reference nominative objects.

(37) Set A and B forms in transitive clauses (assuming an ergative Case system)

Forms	Identity
Set A	ergative pronominal clitics
Set B	true agreement (cross-referencing nominatives)

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<sup>10</sup> The common assumption that Mayan languages have an ergative Case system is based on the pattern of the cross-referencing morphemes in those languages without an aspect split, where intransitives all take Set B forms. This pattern fits the classic definition of an ergative pattern (Dixon 1994): intransitive subjects and transitive objects are marked alike, and transitive subjects are marked differently. It has been pointed out (e.g. Krämer and Wunderlich 1999) that using the pattern based definition of ergativity creates a paradox in Yucatec and the other Mayan languages that have an aspect split in intransitives: when the subject of an intransitive has ergative Case, the pattern is NOT ergative (because transitive and intransitive subjects are marked alike).

<sup>11</sup> There is no absolutive Case. The term ‘absolutive’ was introduced into descriptive typology to label arguments without morphological Case whose identity is nominative or accusative (Legate 2006, Woolford 2006b).

While previous work generally assumes that Set A forms are ergative even in intransitive clauses in Yucatec, this is highly unlikely. While there are languages that do allow ergative Case to mark some intransitive subjects, but it is consistently only the agentive (external) arguments that get ergative Case in such systems (which are called Active in the typological literature). Krämer and Wunderlich 1999 and Bohnemeyer 2004 clearly show that Yucatec is not an active system, because even unaccusative verbs (verbs without an agentive/external subject) take Set A forms in intransitive clauses in the imperfective aspect. Instead, assuming that intransitive subjects have nominative Case in Yucatec (as they should if this is a classic ergative language), it would be a nominative, rather than an ergative pronominal clitic that cross-references them. We know that pronominal clitics are not always morphologically distinguished by Case (e.g. dative and accusative clitics look alike in first and second person in Romance), and there would be little functional reason to morphologically distinguish ergative and nominative clitics in Yucatec since they would never co-occur in a clause. Under this view, Set A forms are always pronominal clitics, but they come in a range of abstract Cases.

(38) Set A and B forms in intransitive clauses

Forms	Identity	
Set A	nominative pronominal clitics	(Imperfective Aspect)
Set B	true agreement	(Perfective Aspect)

Under this account, it is the choice in forms available to cross-reference a nominative argument in intransitives (true agreement or a nominative clitic) that sets the stage for the aspect split. This choice is controlled by aspect. In the general solution outlined above, we plug in the identity of Set A (pronominal clitics) and Set B (agreement), producing the following constraints, and ranking:

(39) XRef, DEP-<sub>Perfective</sub> (clitic) >> \*agreement >> \*clitic

For intransitives, DEP-<sub>Perfective</sub> (clitic) prohibits (inserting) a pronominal clitic in the perfective, so the only choice left is true agreement.

(40) Intransitives in the perfective aspect

input:	V	S	XRef	DEP- <sub>Perf</sub> (clitic)	*agreement	*clitic
a.	V	S-nom	*!			
b.	clitic V	S-nom		*!		*
c. →	V-agr	S-nom			*	

In the imperfective aspect, the contextually restricted DEP constraint has no effect, so \*agreement rules out true agreement, leaving a nominative clitic the only choice.

For transitives, we need a higher constraint to prevent two pronominal clitics in one clause. Assuming that true agreement with ergatives is also prohibited (either universally or by a higher constraint), we get the needed result of a limit of one from each

cross-referencing set per clause. Assuming true agreement can only go with the nominative argument, we get the observed pattern in transitives where Set A (ergative pronominal clitic) cross-references the ergative subject, and Set B (true agreement) cross-references the nominative object.

#### 4.4 Analyzing Yucatec as Nominative-Accusative

It is not actually necessary to assume that Yucatec Maya is an ergative language; there is an essentially equivalent solution if Yucatec has a nominative-accusative Case system like that of English, or Spanish, as suggested in Woolford 2003. Under that view, transitive clauses have a nominative subject which is cross-referenced by true agreement (Set A forms), and an accusative object which is cross-referenced by an accusative pronominal clitic.

(41) Yucatec Case pattern (under the nominative-accusative assumption)

transitive:	subject-nominative	object-accusative
intransitive:	subject-nominative	

(42) Set A and B forms in transitives (assuming a nominative-accusative Case system)

Forms	Identity
Set A	true agreement (cross-referencing nominatives)
Set B	accusative pronominal clitics

Intransitive clauses have the same cross-referencing elements, except that the Set B form that is used is a nominative pronominal clitic. Here, just as in the ergative solution above, the pronominal clitics are not morphologically distinguished for Case.

(43) Set A and B forms in intransitive clauses

Forms	Identity	
Set A	true agreement	(Imperfective Aspect)
Set B	nominative pronominal clitics	(Perfective Aspect)

The reason the aspect split is limited to intransitives under this solution is the same as under the ergative solution: in intransitives, there is a choice of forms to use to cross-reference the sole argument, the nominative subject. Here aspect can govern this choice.

As above, we plug the identity of Set A and Set B forms into the general solution, to produce the constraint ranking that will produce this aspect split:

(44) Solution under the nominative-accusative hypothesis

XRef, DEP-<sub>Perfective</sub> (agreement) >> \*clitic >> \*agreement



In intransitive clauses in the perfective aspect, DEP-*Perfective* (agreement) rules out agreement (insertion) so a nominative pronominal clitic (Set B) is used.

(45) Intransitives in the perfective aspect

input:	V	S	XRef	DEP- <i>Perf</i> (agr)	*clitic	*agr
a.	V	S-nom	*!			
b.	agr V	S-nom		*!		*
c. →	V-cl	S-nom			*	

In the imperfective, the contextually restricted DEP constraint has no effect, so \*clitic rules out a pronominal clitic, leaving candidate in (b) with true agreement as the winner. Transitives work as described above: XRef plus higher constraints against two clitics or two agreement forms per clause select the winning candidate with one of each before the contextually restricted DEP constraint has a chance to have an effect.

Thus we see that the Mayan aspect split can be analyzed in terms of contextual faithfulness, although we cannot rule out a virtually identical account in terms of contextual markedness, with \*agr/perfective instead of the contextually restricted DEP constraint.

## 5. Conclusion

In this paper, we have seen evidence from syntax for contextually restricted versions of constraints that are independently motivated in the literature in context free form. This evidence is from three examples in unrelated languages of what are called *aspect splits* in the typological literature, in Hindi, in Palauan, and in Yucatec Maya. In these aspect splits, ergative Case, prepositions insertion, or the use of pronominal clitics or agreement is restricted to or prohibited in the perfective aspect. This paper has shown that the aspect split in Hindi, in combination with an interacting split in the related language Nepali, provides evidence for contextual faithfulness, rather than contextual markedness. However, the splits in Palauan and Yucatec can potentially be accounted for with either contextually restricted faithfulness or contextually restricted markedness.

The functional motivation for aspect splits, and the contextually restricted constraints that produce them, appears to be different than the functional motivation suggested for contextually restricted constraints in phonology. In phonology, contrast is said to be preserved in contexts where the contrast is most easy to detect (Beckman 1998). In these examples from syntax, the function seems to be *to identify the context itself*. By restricting the aspect in which a particular Case, agreement form, clitic, or preposition can be used, the language can essentially mark (or redundantly mark) aspect without using an aspect morpheme. I call this Parasitic Marking.

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