Person-based split ergativity in Nez Perce is syntactic[1]

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Nez Perce is one among many ergative languages that consistently use nominative case, rather than ergative, for 1st and 2nd person transitive subjects. Two major lines of analysis have been proposed for the synchronic grammar of this type of ergative split. Morphological analyses approach the phenomenon as a case of syncretism between ergative and nominative in 1st and 2nd person; all transitive subjects are assigned an identical syntax. Syntactic analyses posit a featural or structural distinction between 3rd person subjects and 1st and 2nd person subjects, or the clauses containing them. On the basis of modification and coordination patterns, I argue that person-based split ergativity in Nez Perce requires a syntactic analysis. Comparison of the Nez Perce data with recent findings by Legate (2014) reveals variation among languages showing person-based split ergativity: some languages require a morphological analysis, and some (like Nez Perce) require a syntactic analysis. A treatment of the syntactic type of person-based split ergativity is proposed, making use of person-sensitive phrase structure as introduced by Bianchi (2006) and Merchant (2006).

1. INTRODUCTION

Many languages that show ergative marking for one class of transitive subjects also show nominative marking for another class of transitive subjects. This is the phenomenon of split ergativity. The split between the two classes may be made according to properties of the clause, such as aspect and tense, or according to properties of the subject, such as person. In a range of languages, the dividing line between ergative and nominative falls between 1st and 2nd person, on one hand, and 3rd person, on the other: 1st and 2nd person subjects are nominative, regardless of transitivity, whereas 3rd person subjects are ergative in a transitive clause. Nez Perce data exemplify this pattern in (1) and (2). Subjects of all persons appear in the nominative case in intransitive clauses, (1). In transitive clauses, 1st and 2nd person retain the nominative case, (2a-b), while 3rd person subjects switch to ergative case, (2c).[1] [2]

> (1) a. 'Iin   kúu-se-∅.
>   1SG.NOM go-IMPERF-PRES
>   I am going.

b. ’Iim   ’ee   kúu-se-∅.
   2SG.NOM 2SG.CLITIC go-IMPERF-PRES
   You are going.

c. ’Ipí   / Kátie   hi-kúu-se-∅.
   3SG.NOM / Katie.NOM 3SUBJ-go-IMPERF-PRES
   She / Katie is going.

(2) a. ’Iin   ’ipéwi-se-∅   Méli-ne.
       1SG.NOM look.for-IMPERF-PRES Mary-ACC
       I am looking for Mary.

    b. ’Iim   ’ee   ’ipéwi-se-∅   Méli-ne.
       2SG.NOM 2SG.CLITIC look.for-IMPERF-PRES Mary-ACC
       You are looking for Mary.

    c. ’Ip-ním   / Kátie-nim pée-’pewi-se-∅   Méli-ne.
       3SG-ERG / Katie-ERG 3/3-look.for-IMPERF-PRES Mary-ACC
       She / Katie is looking for Mary.

Languages showing this type of ergative split are attested in nearly all the major hotspots of ergativity around the globe. In Australia, the pattern is instantiated by Dyirbal (Dixon 1972), perhaps the best-studied instance of a person-based split. In New Guinea, the pattern appears in Yimas (Foley 1991). In South Asia, it appears in Kham (Watters 1973, 2002), Marāṭhi (Deo & Sharma 2006, Dhongde & Wali 2009) and Punjabi (Bhatia 1993, Deo & Sharma 2006). In the Caucasus, it appears in Georgian (Nash 1997), Kharbadian (Colarusso 1992), and Udi (Schulze 2001). In the Amazon, it appears in Cashinahua (Dixon 1979) and Yaminawa (Valenzuela 2000). In Meso-America, it appears in Mocho’ Mayan (Palosaari 2011). In the Arctic, it appears in West Greenlandic (Fortescue 1984: 257-258), Siberian Yupik (de Reuse 1994: 28) and Alaskan Yup’ik (Reed et al. 1977).[3] In the Pacific Northwest, besides Nez Perce, it appears quite generally in Salish languages (Czaykowska-Higgins & Kinkade 1998), where it has been prominently studied in Lummi (Jelinek 1993) and Halkomelem (Gerdts 1988, Wiltschko 2006).

Analyses of the person-based pattern of split ergativity are part of a broader investigation into the person-animacy effects classically described using Silverstein’s hierarchy (Silverstein 1976). Originally framed primarily as a theory of split ergativity, this hierarchy establishes a ranking among nominal types in terms of their likelihood to display nominative, rather than ergative, in a split ergative system. The ranking in (3) may be divided by a horizontal line at various points; elements above the line will receive nominative, whereas elements below the line will receive ergative.

(3)   1st and 2nd person pronouns   (Silverstein 1976: (13))
            3rd person pronouns
                [+human] common nouns
                    [-human,+animate] common nouns
                        [-animate] common nouns

As part of this overall research area, investigations of person-based split ergativity have followed two potentially complementary lines. One asks for the historical and/or functional motivations of patterns like (1)/(2) and other effects related to the hierarchy in (3). The other asks how hierarchy effects are encoded in synchronic grammar.

This paper is a part of this second strand of research, and its goals are to illuminate some particular grammatical mechanisms underlying person-based ergative splits. I say 'mechanisms', in the plural, as one of my chief conclusions is that both morphological and syntactic mechanisms are at work in producing patterns like (1)/(2) cross-linguistically. The core argument comes from a comparison of Nez Perce, a language whose person split in ergativity has not been studied in depth before, with a diverse set of languages recently studied by Legate (2014) – Dyirbal, Udi, Kham, Siberian Yupik and Maraṭhi. While these languages all show what seems initially to be the same type of split ergativity, clear differences emerge under modification and coordination. These differences may be predicted if the person split may arise either by morphological mechanisms or by syntactic ones. The implication is that the effects of the Silverstein hierarchy overall are distributed among multiple components of the grammar. This, I suggest, is in keeping with work on historical and functional aspects of hierarchy effects which locate the ultimate source of these effects external to the grammar itself.

The paper is structured as follows. In the next section, I introduce the basic facts of ergativity and clausal syntax in Nez Perce. In section 3, I briefly review the range of existing proposals for the synchronic grammar of person-based split ergativity, grouping them into 'morphological' and 'syntactic' categories. I then present two arguments from Legate (2014) in favor of the morphological analysis as a cross-linguistic explanation for person-based split ergativity. In section 4, I present the behavior of Nez Perce on Legate's diagnostics, showing that it behaves unlike the group of languages she studies. The Nez Perce patterns are, however, to be expected on certain syntactic approaches to the person split. In section 5, I propose an explicit account of the syntax of the person split in Nez Perce, building on Bianchi (2006) and Merchant (2006)'s approach to person-sensitive syntax and Deal (2010a,b)'s approach to ergative case. In section 6, I discuss implications for the nature of hierarchy effects, and conclude.

2. Ergativity in Nez Perce

Nez Perce is a Sahaptian language spoken in Idaho, Washington, and Oregon, USA.[4] The language is highly endangered; recent estimates count no more than

30 native speakers, all above the age of 65 (Harold Crook, p.c.). The data in this paper come from fieldwork on the Nez Perce Reservation in Lapwai, Idaho. Data are presented in the practical orthography used by the language program of the Nez Perce Tribe. A table of correspondences to IPA is given in the appendix.

Nez Perce has a nominative-accusative system of verb agreement alongside a case system that varies between nominative-accusative (for 1st and 2nd person) and tripartite ergative (for 3rd person).[5] The basic pattern is exemplified for 1st person in (4) and 3rd person in (5). As (5) shows, intransitive subjects, transitive subjects, and transitive objects are all marked distinctly in the 3rd person.

(4) a. 'Iin   wáaqo' kúu-∅-ye.
      1SG.NOM already go-PERF-REM.PAST
      I already went.

    b. 'Iin   'e-kíwyek-∅-e   sik'éem-ne.
      1SG.NOM 3OBJ-feed-PERF-REM.PAST horse-ACC
      I fed the horse.

    c. Ciq'áamqal-m hi-ke'níp-∅-e   'íin-e.
      dog-ERG   3SUBJ-bite-PERF-REM.PAST 1SG-ACC
      The dog bit me.

(5) a. 'Áayat   wáaqo' hi-kúu-∅-ye.
      woman.NOM already 3SUBJ-go-PERF-REM.PAST
      The woman already went.

    b. 'Áayato-nm pée-kiwyek-∅-e   sik'éem-ne.
      woman-ERG 3/3-feed-PERF-REM.PAST horse-ACC
      The woman fed the horse.

    c. Ciq'áamqal-m pée-ke'np-∅-e   'áayato-na.
      dog-ERG   3/3-bite-PERF-REM.PAST woman-ACC
      The dog bit the woman.

The verbal agreement system distinguishes 3rd from non-3rd person and plural from non-plural number. Non-plural number and 1st and 2nd person – henceforth, 'local person' – are not marked on the verb overtly. The overt markers consist of the five prefixes listed in (6), along with the portmanteau suffixes listed in the rightmost column of (7).[6]

(6) Agreement prefixes
    hi-   3rd person subject
    'e-   3rd person object
    pee-   3rd person subject and 3rd person object
    pe-   plural subject
    nees-   plural object

(7)   Portmanteau aspect/mood and agreement suffixes

	Basic form	Plural subject form
Imperfective	se/ce	siix/ciix
Habitual	teetu	tee'nix
Imperative	$\emptyset$/y/n	tx/nitx

Plural verb agreement occurs only for animate arguments (Deal 2013a). In the imperfective, habitual, and imperative, the plurality of an animate subject is marked as part of a portmanteau suffix, as in (7). The basic form of the aspect/mood suffix is used if the subject is singular and/or inanimate. In other aspect/mood categories, the plurality of an animate subject is marked by the plural subject prefix *pe*; this prefix is simply absent for singular and/or inanimate subjects. Full paradigms for verbal agreement are given in Deal (To appear).

Case is marked by suffixes which attach to nouns and, optionally, to numerals, quantifiers, demonstratives, and attributive adjectives. The table in (8) lists the core structural cases and their common allomorphs. Note that ergative and genitive are marked the same way, as is often true in ergative languages.[7]

(8)   Major cases and their common allomorphs

Nominative	$\emptyset$
Ergative/Genitive	-m, after derivational suffixes -nm, after vowels -im, after nasals -nim, otherwise
Accusative	-e, after n -ne/na (depending on vowel harmony), otherwise

With the exception of relative clauses, noun modifiers are reliably prenominal.[8] Case-marking on prenominal modifiers plays an important role in section 4; it is exemplified in (9)-(11).

(9)   Kuckúc-nim 'áatamooc-nim himeq'íis-ne 'áatamooc-na
      small-ERG   car-ERG   big-ACC   car-ACC
      páa-tamya-n-a.
      3/3-hit-PERF-REM.PAST
      The small car hit the big car.

(10) Ki-nm   pit'íin-im 'úuyit pée-x-n-e   *pro.*
      this-ERG girl-ERG   first 3/3-see-PERF-REM.PAST PRO.3SG
      This girl saw him first.

(11) *Pro*   pée-'pewi-six-$\emptyset$ náaqc-na miya'ás-na.
      PRO.3PL 3/3-look.for-IMPERF.PL-PRES one-ACC child-ACC
      They're looking for one child.

Nominative, ergative, genitive, and accusative forms of personal pronouns are given in the tables in (12). Anticipating the conclusion of section 4, I leave the cells corresponding to ergative local pronouns blank.

(12)   Case-marked forms of personal pronouns

a.   Singular

	Nominative	Ergative	Genitive	Accusative
1sg	'iin		'íinim	'íine
2sg	'iim		'imím	'imené
3sg	'ipí	'ipním	'ipním	'ipné

b.   Plural

	Nominative	Ergative	Genitive	Accusative
1pl	nuun		núunim	núune
2pl	'imé		'iméem	'imuuné
3pl	'imé	'iméem	'iméem	'imuuné

Note that the plural 2nd and 3rd person pronouns are identical in all contexts except as a transitive subject. In this environment, the 2nd person subject is nominative (*'imé*), whereas the 3rd person subject is ergative (*'iméem*).[9]

(13)   'Imé   'eetx   pe-cewcew-núu-m-∅-e
       2PL.NOM 2PL.CLITIC S.PL-call-APPL-CISLOC-PERF-REM.PAST
       pro.
       PRO.1SG
       You (pl) called me.

(14)   'Imée-m hi-pe-cewcew-núu-m-∅-e   *pro*.
       3PL-ERG 3SUBJ-S.PL-call-APPL-CISLOC-PERF-REM.PAST PRO.1SG
       They called me.

These examples can be diagnosed as unambiguously transitive thanks to the presence of the applicative verbal suffix.[10]

   At the clausal level, the order of major constituents is quite flexible, and pronominal subjects and objects of all persons are often omitted.[11] Omitted arguments are indicated by *pro* in Nez Perce examples, with the gloss line reflecting the person and number features conveyed by the speaker's translation; for ease of reading, I follow a convention of placing *pro*s in SVO order. The person and number of a missing argument are frequently recoverable from the verbal inflection.

(15)   *Pro*   pée-p-∅-e   *pro*.
       PRO.3SG 3/3-eat-PERF-REM.PAST PRO.3SG
       He ate it.

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Recall, however, that verbal inflection includes no special markers for 1st or 2nd person. Clauses containing a 1st or 2nd person argument are typically disambiguated by the use of full pronouns or by the presence of a clitic from the table in (16).[12]

(16) Pronominal clitics
      ’ee   2nd person singular
      ’eetx   2nd person plural
      kiye   1st person plural inclusive (1st person + 2nd person)

These clitics most commonly appear in immediate preverbal position, and may double the full pronouns.

(17) ’Iim   ’ee   wee-s   wepcúux.
      2SG.NOM 2SG.CLITIC be-PRES smart
      You (sg) are smart.

(18) *Pro*   ’ime-né ’ee   ’iyóox̂oo-sa-∅.
      PRO.1SG 2SG-ACC 2SG.CLITIC wait.for-IMPERF-PRES
      I'm waiting for you (sg).

(19) *Pro*   ’imuu-né ’eetx   tiwíx-nu’.
      PRO.1SG 2PL-ACC 2PL.CLITIC follow-FUT
      I will follow you (pl).

Unlike the full pronouns, the clitics may not be coordinated or host focus suffixes such as *-cim* 'only' or *-k'u* 'also'. They also differ from full pronouns in that they do not mark case distinctions. They may occur with subjects, as in (13) and (17), as well as objects, as in (18) and (19). No parallel set of clitics exists for 3rd or (non-inclusive-plural) 1st person arguments.

   The ergative character of Nez Perce is confined to its case system. The language does not show syntactic ergativity in A' extraction.[13] Verbal morphology remains constant across declaratives, *wh*-questions and relative clauses; there is no special clause type for extraction of an ergative.

(20) Laqáas-nim pee-p-téetu-∅   pe'túu-ne.
      mouse-ERG 3/3-eat-HAB-PRES various.things-ACC
      A mouse eats various things.

(21) ’Itúu-nm pee-p-téetu-∅   łepłép-ne?
      what-ERG 3/3-eat-HAB-PRES butterfly-ACC
      What eats butterflies?

(22) ’Itúu-ne łepłép-nim pee-p-téetu-∅?
      what-ACC butterfly-ERG 3/3-eat-HAB-PRES
      What do butterflies eat?

The language also does not show an ergative split conditioned by clausal properties such as tense or aspect. Examples (23) show that 3rd person transitive subjects are ergative-marked across the language's three tenses: present, recent past and remote past. These examples also show that ergative marking appears in the imperfective aspect.

(23)   a.   'Áayato-nm picpíc-ne pée-kiwyek-se-∅   cúu'yem.
            woman-ERG cat-ACC 3/3-feed-IMPERF-PRES fish.NOM
            The woman is feeding the cat fish.[14]

       b.   Naaqc 'áayato-nm   pée-kiwyek-sa-qa   picpíc-ne ke
            one   woman-ERG 3/3-feed-IMPERF-REC.PAST cat-ACC C
            yox̂   k'óomaynin' hi-wa-qá   watíisx.
            RP.NOM sick   3SUBJ-be-REC.PAST 1.day.away
            A woman was feeding a cat that was sick yesterday.

       c.   Ha-hácwal-m pée-kiwyek-se-ne   ciq'áamqal-na.
            PL-boy-ERG   3/3-feed-IMPERF-REM.PAST dog-ACC
            The boys fed the dog.[15]

Examples (24) show that 3rd person transitive subjects remain ergative in other aspectual categories, such as perfective and habitual.

(24)   a.   Mátt-nim hi-nees-cewcewí-n-e   pro.
            Matt-ERG 3SUBJ-O.PL-call-PERF-REM.PAST PRO.3PL
            Matt called them.

       b.   Ángel-nim hi-nees-cewcew-téetu-∅   núun-e.
            Angel-ERG 3SUBJ-O.PL-call-HAB-PRES 1PL-ACC
            Angel usually calls us.

Likewise, negation and clausal embedding have no effect on the appearance of the ergative case. The language's ergative split is strictly on the basis of person.

   With this background, we turn in the next section to proposed explanations for person-based split ergativity. We return to the Nez Perce facts in section 4.

3. TWO APPROACHES TO PERSON-BASED SPLIT ERGATIVITY

Theoretical approaches to person-based split ergativity may be divided into two groups depending on the type of explanatory mechanism posited. On the morphological approach, the relevant mechanisms are active at the syntax-phonology interface, regulating the realization or exponence of case features assigned in syntax. On the syntactic approach, the relevant mechanisms are active in the syntax itself. In this section I briefly introduce the two styles of analysis before presenting arguments from Legate (2014) in favor of the morphological approach.

   The central insight of morphological approaches is that patterns like (1)/(2) constitute an instance of syncretism. Subjects of all persons are assigned an

ergative case feature in ergative languages. Person splits result when, for local persons, nominative and ergative share a morphological form. Applied to Nez Perce, this leads to a view of the pronominal system as partially depicted in (25): ergative forms of local person pronouns exist, but are identical to nominative counterparts.

(25) Nez Perce singular personal pronouns

| | Case assigned in syntax | | | |
	Nominative	Ergative	Genitive	Accusative
1sg	’iin	’iin	’íinim	’íine
2sg	’iim	’iim	’imím	’imené
3sg	’ipí	’ipním	’ipním	’ipné

The partial syncretism between nominative and ergative has been attributed to a variety of sources:[16]

(26)   i. Ergative case is realized by a special zero allomorph on local person subjects, which happens to look identical to the nominative (Aldridge 2007).

   ii. Markedness constraints prevent the realization of ergative case on local person subjects (Deo & Sharma 2006, Woolford 2008).[17]

   iii. Abstract ergative case features are deleted by a morphological rule of Impoverishment applying to local person subjects (Keine & Müller 2008, Legate 2014).

   iv. Abstract ergative features are realized overtly only when combined with 3rd person; in all other circumstances they receive a default zero realization (Deal 2010b).

The core of the syntactic analysis, by contrast, is that what you see is what you get: the absence of an ergative case form for 1st and 2nd person subjects is due to the failure of syntactic ergative case assignment.[18] It is not simply that ergative versions of the local pronouns are realized in a special way in languages with a person-based split; rather, in such languages, the relevant syntactic objects do not exist. A number of potential causes for their non-existence have been explored:

(27)   i. Markedness constraints prevent assignment of [ERG] to local person subjects (Aissen 1999, Deo & Sharma 2006, de Hoop & Malchukov 2008, Malchukov 2008).[19]

   ii. Local person pronouns are DPs, not NPs, and ergative case is only assigned to NPs (Kiparsky 2008, Richards 2008).

   iii. Local person features require licensing by a ParticipantP projection in the clause, which splits the clause into two case domains and prevents assignment of [ERG] (Coon & Preminger 2012).

iv. The v which introduces local person subjects does not assign [ERG] (Carnie 2005, Alexiadou & Anagnostopoulou 2006).

v. Local person subjects must occupy a position in the clausal spine in which [NOM] is active, whereas 3rd person subjects must occupy a position in which [ERG] is active (Jelinek 1993, Nash 1997, Merchant 2006).[20]

Legate (2014) discusses several key points where the syntactic and the morphological approaches differ in their predictions, two of which are of central interest here.[21] The first concerns modifiers of the subject. If subjects of all persons have the same syntax and the same case features, as the morphological approach proposes, they should show the same pattern of case on appositive modifiers. If the modifier of a 3rd person subject is marked with ergative, the modifier of a 1st or 2nd person subject should be marked with ergative as well. This follows on the morphological approach because the syncretic realization of ergative and nominative holds only for the local person pronouns themselves, *not* for other material that may modify them. On the syntactic approach, by contrast, the entire subject lacks an ergative feature when 1st or 2nd person.[22] Therefore, both the pronoun and its modifiers should lack ergative case.

Legate discusses four languages with person-based split ergativity where data is available on modification. In all of these languages – Dyirbal, Udi, Kham, and Marathi – modifiers of local person subjects show ergative, just like modifiers of 3rd person subjects. This supports the morphological approach. The pattern is illustrated below with data from Marathi. Examples (28)-(30), from Dhongde & Wali (2009), show the basic pattern of person-based split ergativity. This pattern holds in Marathi only in the perfective, and so all Marathi examples given here use this aspect.[23]

(28) Mi   babu-la   bolaw-l-ə.
     I.NOM Babu-DAT call-PERF-NSG
     I called Babu. (Dhongde & Wali 2009: 183)

(29) Tu   babu-la   bolaw-l-ə-s.
     you.NOM Babu-DAT call-PERF-NSG-2SG
     You called Babu. (Dhongde & Wali 2009: 183)

(30) Lili-ni babu-la   bolaw-l-ə.
     Lili-ERG Babu-DAT call-PERF-NSG
     Lili called Babu. (Dhongde & Wali 2009: 179)

Pronominal subjects in Marathi may be modified by adjectives, in which case the adjective follows the pronoun and is case-marked. In the crucial examples, (31) and (32), we see that modifiers of local person subjects take the ergative case.[24]

(31) Mi   bicharii-ne sagla kaam ke-la.
     I.NOM poor-ERG all   work do-PERF.3SG
     Poor little me did all the work. (Legate 2014: 195)

(32) Tu   bicharii-ne sagla kaam ke-las.
      you.NOM poor-ERG   all   work do-PERF.2SG
      Poor little you did all the work. (Legate 2014: 195)

This pattern provides evidence of a purely morphological basis for person-based split ergativity in Marāṭhi. Parallel facts, as noted above, hold in Dyirbal, Udi and Kham (Legate 2014: pp. 188, 191, 193). The results of this diagnostic are summarized in (33).

(33) Modifiers of local person transitive subject

Morphological approach prediction:	Ergative	✓
Syntactic approach prediction:	Nominative	
Marāṭhi, Dyirbal, Udi, Kham:	Ergative	

A second diagnostic discussed by Legate concerns coordination. The morphological approach predicts that it should be possible to coordinate local and non-local subjects without altering the case pattern for each individual coordinate. Thus a coordination like 'he and I', serving as transitive subject, should show ergative case on the 3rd person conjunct, but nominative case on the 1st person conjunct. The well-formedness of such coordinations follows because all transitive subjects are the same in structural properties and in abstract case features; they differ only in their morphological realization.

On the syntactic approach, predictions for coordination differ according to the precise mechanism implicated in the absence of [ERG] on local person subjects, and the way this mechanism interacts with coordination.[25] To articulate a first set of predictions, let us suppose that the overall syntactic behavior of the subject is decisive in determining case assignment, rather than the behavior of either individual coordinate. Two types of predictions are thus possible. First, on views which reference the subject's person value (27i,iii-v), the expectation is that coordinations including local persons should lack all ergative case. We learn from agreement in many languages that a coordination including a 1st person is 1st person plural, and otherwise, a coordination including a 2nd person is 2nd person plural (Corbett 1983, 2006, Dalrymple & Kaplan 2000).[26] Thus any coordinated subject including a local person will act as a local person subject, resulting in the absence of [ERG] (by whatever mechanism). Second, on the view that the syntactic category of the subject is the decisive factor (27ii), the expectation for case assignment in coordination depends on which coordinate determines the categorial behavior of the coordination overall.[27] The entire coordination could in principle accordingly behave either like a local person argument (a DP) or like a 3rd person argument (an NP), respectively lacking or showing ergative throughout the coordination.

A different set of predictions flows from the syntactic approach under the assumption that the mechanisms determining case assignment also apply to

individual coordinates inside coordinated subjects. First, if case assignment to each coordinate is determined according to that coordinate's person value (27i) or syntactic category (27ii), the expectation parallels that of the morphological approach: local and non-local subjects should coordinate without altering their case pattern. Second, if local person features inside coordinated subjects require licensing by a head which prevents [ERG] at the clausal level (27iii), coordinations including local persons again should lack all ergative case. Third (and most distinctively), if local and non-local coordinates of subjects must occupy distinct positions in the clausal spine (27v), the expectation is that such coordinations should be simply ungrammatical. The coordinates impose contradictory requirements on the position the coordination must obtain. A potential further prediction is that coordinated *intransitive* subjects should reveal a similar restriction, if subjects (as Merchant 2006 proposes) and coordinates thereof must generally occupy specialized person-based positions. I will show in section 5 that this final set of predictions can also be made in a system where local and non-local (coordinates of) subjects must merely agree with distinct person-related heads, instead of occupying distinct positions.[28]

The overall set of predictions for coordinations is summarized in (34).

(34)   Predictions for coordinations of local and non-local persons as transitive subject

Morphological approach:	Grammatical.
	Ergative on non-local coordinates.
Syntactic approaches:	
Overall properties of the coordinated subject are decisive:	
27i,iii-v.	Grammatical.
	Nominative on all coordinates.
27ii.	Grammatical.
	Nominative on all coordinates
	OR
	Ergative on all coordinates.
Properties of individual conjuncts are decisive:	
27i-ii.	Grammatical.
	Ergative on non-local coordinates.
27iii.	Grammatical.
	Nominative on all coordinates.
27v.	Ungrammatical.

Legate (2014) discusses three languages with person-based split ergativity where data is available on coordination. In all of these languages – Udi, Maraṭhi, and Siberian Yupik – local person subjects may be coordinated with 3rd person subjects, and the coordinates retain the case pattern they show as simplex transitive subjects. This is exemplified for Maraṭhi in (35).

(35) Liki-ne ani mi   keli   kha-ll-i.
     Liki-ERG and I.NOM banana.NPL.NOM eat-PERF-NPL
     Liki and I ate bananas. (Legate 2014: 194)

This result is expected on all versions of the morphological approach. It is expected on the syntactic approach only if the person or category features of individual coordinates are decisive in determining case assignment. (Legate 2014 does not discuss this second possibility.) As noted above, similar findings hold for Udi (Legate 2014: 191) and Siberian Yupik (Legate 2014: 196). In Udi, as in Maraṭhi, the morphological approach provides a unifying explanation for the behavior of modifiers and of coordinations.

On the basis of the Maraṭhi data reviewed in this section, together with parallel facts from Dyirbal, Udi, Kham, and Siberian Yupik, Legate concludes that "split ergativity based on nominal type is a morphological, rather than syntactic, phenomenon" (2014: 209). In the next section, I argue that this picture is incomplete.[29] Applied to Nez Perce, the same tests of modification and coordination reveal a syntactic basis for person-based split ergativity.

4. Person-based split ergativity in Nez Perce is syntactic

We begin with the modification diagnostic. Recall that in addition to marking case on the head noun, Nez Perce shows optional case concord between a noun and its prenominal modifiers. We see this concord in (36) in the 3rd person subject *yú'snim 'iceyéeyenm* 'poor Coyote'. Note that this sentence describes part of a traditional story in which Coyote is the main character, and so presumably *'iceyéeye* 'Coyote' here is used as a proper name.

(36) Yú's-nim 'iceyéeye-nm, wéet'u minma'í 'itúu-ne
     poor-ERG coyote-ERG NEG   PRT   what-ACC
     pée-p-se-∅.
     3/3-eat-IMPERF-PRES
     Poor Coyote isn't eating anything.

On the morphological approach, we expect the case marking on the modifier *yú'snim* to remain constant when the subject is changed from a 3rd person name to a 1st or 2nd person pronoun. This, however, is not what we find. The switch to a local person subject brings the switch to a nominative form of the modifying adjective. The ergative form is no longer acceptable.

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(37) Coyote says:
Yu'c / *yú's-nim *pro,* wéet'u q'o minma'í 'itúu-ne
poor.NOM / *poor-ERG PRO.1SG NEG PRT PRT what-ACC
'ee-pí-se-∅.
3OBJ-eat-IMPERF-PRES
Poor me isn't eating anything.
Consultant comment: "You can't use *yu'snim* [poor-ERG] for ME."

(38) Fox tells Coyote:
Yu'c / *yú's-nim *pro,* wéet'u q'o 'itúu-ne 'ee
poor.NOM / *poor-ERG PRO.2SG NEG PRT what-ACC 2SG.CLITIC
'ee-pí-se-∅.
3OBJ-eat-IMPERF-PRES
Poor you isn't eating anything.

This result, which is notably different from the Dyirbal, Udi, Kham, and Marāṭhi facts reviewed by Legate, is as expected on the syntactic approach.

A second type of modification test yields results consistent with only some morphological approaches, but all syntactic approaches. In addition to independent adjectives, Nez Perce allows pronouns to be modified by various suffixes. One of these is the suffix *ciwáatx̂* 'alone', which is special among the suffixes in that it attaches between the pronoun and its case marker. This is shown for the 1st person plural pronoun in (39).[30]

(39) *Pro* non-ciwáatx̂-na
PRO.3SG 1PL-alone-ACC
hi-nees-x̂ic'em-núu-∅-ye.
3SUBJ-O.PL-get.angry-APPL-PERF-REM.PAST
He got mad at [us alone].

Modification by *ciwáatx̂* 'alone' is of special relevance for morphological approaches like Aldridge 2007, which posits a zero realization for the ergative feature in the context of a local person feature, and Deal 2010b, which posits an overt realization for the ergative feature only in the context of a 3rd person feature. If allomorphy may only be determined by linearly adjacent material, as Paster (2006) and Embick (2010) have argued, then the former view leads us to expect that the ordinary, nonzero exponent of ergative should reappear when *ciwáatx̂* 'alone' intervenes linearly between the local person pronoun and the case marker; the latter view leads us to expect that *ciwáatx̂* should interfere with ergative case marking on 3rd person pronouns. Neither expectation is borne out. Rather, third person pronouns modified by *ciwáatx̂* continue to bear overt ergative case as transitive subjects or (as in these examples) as appositive modifiers thereof, (40). In contrast, local person pronouns modified by *ciwáatx̂* continue to lack ergative case, (41).

(40) 'Ip-ciwáatx̂-nim 'iceyéeye-nm pée-p-se-∅   c'ixc'íx-ne.
    3SG-alone-ERG coyote-ERG   3/3-eat-IMPERF-PRES grass-ACC
    Coyote is eating the grass alone.

(41) 'In-ciwáatx̂   / *'in-ciwáatx̂-nim 'íin=k'u
    1SG-alone.NOM / *1SG-alone-ERG   1SG.NOM=also
    'ee-p-téetu-∅   c'ixc'íx-ne.
    3OBJ-eat-HAB-PRES grass-ACC
    I too usually eat the grass alone.

The facts about *ciwáatx̂* may be accounted for on morphological analyses like
Keine & Müller (2008), Woolford (2008) and Legate (2014) if, for instance,
the mechanisms that prevent spell-out of ergative on local person pronouns
apply to all *words* containing such pronouns. They may also be accounted for
straightforwardly on all versions of the syntactic analysis, where local person
subjects and portions thereof are expected to systematically lack ergative.

Table (42) summarizes the predictions about modifiers and the findings for Nez
Perce, by contrast to the findings in Maraṭhi, Dyirbal, Udi and Kham.

(42) Modifiers of local person transitive subject

Morphological approach prediction:	Ergative (at least when the modifier does not itself contain a person feature)	✓
Syntactic approach prediction:	Nominative	✓
Maraṭhi, Dyirbal, Udi, Kham:	Ergative	
Nez Perce:	Nominative	

This provides a first indication that person-based split ergativity is not a uniform
phenomenon across languages.

Additional evidence in this direction comes from coordinations, which are
formed in Nez Perce with the coordinators *kaa* 'and' or *'íitq'o* 'or'. Case affixes
may appear on each coordinate individually, or just on the final coordinate. (The
latter option instantiates what Johannessen (1998) calls 'unbalanced coordina-
tion'.)

(43) Kátie(-nim) kaa Hárold-nim   pée-'pewi-six-∅
    Katie(-ERG) and Harold-ERG   3/3-look.for-IMPERF.PL-PRES
    Múna-ne.
    Muna-ACC
    Katie and Harold are looking for Muna.

(44) Háama   kaa 'áayat   hi-pa-'ác-∅-a.
    man.NOM and woman.NOM 3SUBJ-S.PL-enter-PERF-REM.PAST
    A man and a woman came in.

(45) *Pro*   'e-néec-'ipewi-se-∅   Ángel(-ne) kaa
PRO.1SG 3OBJ-O.PL-look.for-IMPERF-PRES Angel(-ACC) and
Tátlo-ne.
Tatlo-ACC
I'm looking for Angel and Tatlo.

Examples (43) and (44) show that coordinated subjects pose no inherent grammatical problem in Nez Perce, whether in a transitive clause or an intransitive one. Examples of this type are readily accepted as grammatical, and volunteered in translation from English. The same can be seen in a coordination of two local person pronouns as subject, (46).

(46) 'Iim   'íitq'o 'iin   kíye   'e-pe-múu-no'qa
2SG.NOM or   1SG.NOM 1PL.INCL.CLITIC 3OBJ-S.PL-call-MODAL
Ángel-ne   'íitq'o Tátlo-ne.
Angel-ACC or   Tatlo-ACC
You or I should call Angel or Tatlo.

To express the coordination of local and non-local subjects, however, speakers shift to an entirely different sentence type – a comitative, or so-called Plural Pronoun Construction (Schwarz 1988, Vassilieva & Larson 2005, i.a.). The non-local argument is encoded in a comitative phrase and the verb shows agreement with a plural subject. (The presence of a plural argument is also marked in (48) by the 2nd person plural clitic *'eetx*.) Notably, there is no coordinator, and presumably no coordination of local and non-local arguments.

(47) *Pro*   'e-'péwi-six-∅   Múna-ne Katie-níin.
PRO.1PL 3OBJ-look.for-IMPERF.PL-PRES Muna-ACC Katie-with
Katie and I are looking for Muna.
lit. We are looking for Muna with Katie.

(48) Katie-níin *pro*   'eetx   'e-pe-'páw-yo'qa
Katie-with PRO.2PL 2PL.CLITIC 3OBJ-S.PL-look.for-MODAL
Múna-ne.
Muna-ACC
You (sg) and Katie should look for Muna.
lit. You (pl) should look for Muna with Katie.

In translating from English into Nez Perce, speakers shift to this sentence type both when the clause is transitive, as in (47) and (48), and when it is intransitive, as in (49).

(49) 'In-láwtiwaa-niin *pro*   wi-síix-∅   'éey'snin'.
1SG-friend-with   PRO.1PL be-IMPERF.PL-PRES happy
My friend and I are happy.
lit. We are happy with my friend.

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The Plural Pronoun Construction is equally available when all arguments are 3rd person (Rude 1985: 101-103); this construction imposes no person restriction. Simple coordination of subject DPs, however, does appear to impose a restriction. Generally, judgments on sentences with local and non-local subject coordinates range from skepticism and a suggested correction to the Plural Pronoun Construction to outright rejection. Note that this holds across a range of case patterns in transitive clauses: both coordinates in the nominative, as in (50), ergative on the final coordinate, as in (51), and ergative on a non-final 3rd person coordinate, as in (52).

(50) * ’Iin   kaa Ángel   ’e-nées-tecukwe-cix-∅
      1SG.NOM and Angel.NOM 3OBJ-O.PL-teach-IMPERF.PL-PRES
      pro.
      PRO.3PL
      I and Angel are teaching them.

(51) * ’Iin   kaa Ángel-nim ’e-nées-tecukwe-cix-∅
      1SG.NOM and Angel-ERG 3OBJ-O.PL-teach-IMPERF.PL-PRES
      pro.
      PRO.3PL
      I and Angel are teaching them.

(52) * Ángel-nim kaa ’iin   ’e-nées-tecukwe-cix-∅
      Angel-ERG and 1SG.NOM 3OBJ-O.PL-teach-IMPERF.PL-PRES
      pro.
      PRO.3PL
      Angel and I are teaching them.

The restriction also holds in intransitive clauses, where both coordinates are strictly nominative.

(53) * ’Iin   kaa ’in-láwtiwaa   wi-síix-∅   ’éey’snin’.
      1SG.NOM and 1SG-friend.NOM be-IMPERF.PL-PRES happy
      I and my friend are happy.

The one systematic exception is instantiated by examples like (54) and (55): the local person pronoun appears in the final position, and ergative case is absent throughout the coordination. While not perfect, such examples are considerably better than (50)-(53). (See note 31 for further discussion of the status of these examples.)[31]

(54) ? Ángel   kaa ’iin   ’e-nées-tecukwe-cix-∅
      Angel.NOM and 1SG.NOM 3OBJ-O.PL-teach-IMPERF.PL-PRES
      pro.
      PRO.3PL
      Angel and I are teaching them.

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(55) ? 'In-láwtiwaa   kaa 'iin   wi-síix-∅   'éey'snin'.
      1SG-friend.NOM and 1SG.NOM be-IMPERF.PL-PRES happy
      My friend and I are happy.

It seems to me most plausible that examples of this type are a calque from English, a language in which all Nez Perce speakers are fluent. The primary fact in support of this conclusion is that coordinations like these are characterized as "beginner's speech" or "for students". Interestingly, judgments on these coordinations faithfully reproduce a fact of English coordinations that may be attributed to prescriptive factors: in subject position, nominative 1st person pronouns must occur in final position. Compare (50) and (53), with 1st person first, to the minimally different (54) and (55), with 1st person last; only the latter are accepted. Just like in English, the order effect in Nez Perce holds only of subjects, and not of objects. Compare (56), where either order is acceptable for an object coordination.

(56) a. Weet *pro*   nées-hek-ce-m-∅   'íin-e   kaa
          Y.N   PRO.2SG O.PL-see-IMPERF-CISLOC-PRES 1SG-ACC and
          'in-láwtiwaa-ma-na?
          1SG-friend-PL-ACC
          Do you see me and my friends?

      b. Weet *pro*   nées-hek-ce-m-∅
          Y.N   PRO.2SG O.PL-see-IMPERF-CISLOC-PRES
          'in-láwtiwaa-ma-na kaa 'íin-e?
          1SG-friend-PL-ACC and 1SG-ACC
          Do you see my friends and me?

I draw two conclusions from this overall set of judgments. First, the English pattern of 1st person last in subject coordinations – a restriction found to hold almost categorically of nominative pronouns in acceptability and corpus studies by Grano (2006) – has been adopted into Nez Perce, at least by the speakers consulted. The pattern is independent of ergative case, as it applies both to transitive subjects and to intransitive ones. Second, the structure of English subject coordinations has been borrowed into Nez Perce as the "beginner's speech" construction (54)/(55). The native pattern seems to be that local and non-local person subjects cannot be coordinated.

From this perspective, the most relevant judgments on subject coordinations of local and non-local persons are (50)-(53). These judgments make for a clear contrast with (43) and (44), where local and non-local persons are not present in the same coordination. Also to be contrasted with these examples are sentences where the coordination serves as an object. Here, as we saw in part in (56), coordinations of local and non-local persons show no special behavior: they are well-formed, and allow case on both coordinates or just the final one.

(57) Jím-nim hi-náac-'yax̂-n-a   'íin(-e)   kaa Mátt-na
     Jim-ERG 3SUBJ-O.PL-find-PERF-REM.PAST 1SG(-ACC) and Matt-ACC
     cepéeletp'et-pe.
     picture-LOC
     Jim found me and Matt in the picture.

This data set overall indicates that some syntactic problem is encountered in the combination of three factors: coordination, subject, and local plus non-local person. The response to this problem involves switching to the Plural Pronoun Construction, an alternative mode of expression that does not involve a coordinated subject.

These facts are different from the Marathi example (35) and, overall, not predicted by the morphological analysis. Unlike the modification facts, they are also unexpected on the majority of syntactic analyses. Among the syntactic proposals listed in (27), the ill-formedness of subject coordinations (50)-(53) is not predicted by any version except (v). The results follow on this view with two crucial assumptions: (i) the syntactic requirements imposed on subjects are visited not only on entire subject coordinations, but also on the coordinates thereof, and (ii) these requirements apply both in transitive and in intransitive clauses. The overall results are summarized below.

(58)   Coordination of local and non-local persons as transitive subject

Morphological approach:	Grammatical. Ergative on non-local coordinates.
Syntactic approaches:	
Overall properties of the coordinated subject are decisive:	
27i,iii-v.	Grammatical. Nominative on all coordinates.
27ii.	Grammatical. Nominative on all coordinates OR Ergative on all coordinates.
Properties of individual conjuncts are decisive:	
27i-ii.	Grammatical. Ergative on non-local coordinates.
27iii.	Grammatical. Nominative on all coordinates.
27v.	Ungrammatical.
Marathi, Udi, Siberian Yupik:	Grammatical. Ergative on non-local coordinates.
Nez Perce:	Ungrammatical.

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Taken together with the evidence from modification in languages like Marāṭhi, these results confirm the need to recognize two sources for person-based split ergativity, one syntactic and one morphological. Beyond this, they reveal evidence that the syntactic variety of person split involves distinct, incompatible requirements holding of local and non-local persons, whether as subjects or as coordinates thereof. The conflict between these requirements plays the lead role in ruling out coordinations of local and non-local persons as subjects in Nez Perce.
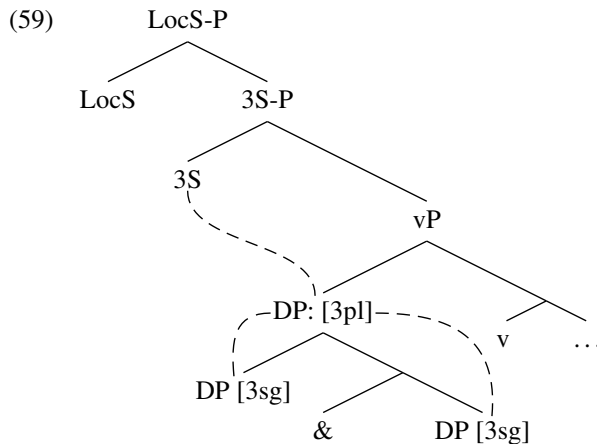
5. THE SYNTAX OF THE PERSON SPLIT

The results of the coordination and modification diagnostics lead to two core conclusions about the syntax of person in Nez Perce. First, and most fundamentally, local and 3rd person subjects differ not just in their morphology, but also in their syntax. Distinct grammatical requirements are imposed both for local persons and for 3rd persons, and these requirements extend to the coordinates of a subject coordination. The conflict between these requirements explains why coordinations of local and non-local persons are not well-formed as subjects. This ill-formedness extends across both transitive clauses, where subjects may receive ergative, and intransitive clauses, where subjects are always nominative. This suggests that the requirements in question should not be stated directly in terms of case. Second, the person-based syntactic system nevertheless interacts with case assignment in the transitive clause. Unlike 3rd persons, local person subjects are not assigned an [ERG] feature in syntax, regardless of transitivity. This explains why ergative case is never present on modifiers of local person subjects. This section sketches a syntactic analysis incorporating these conclusions.

I begin with the observation that a variety of languages, both ergative and non-ergative, provide evidence for dedicated person-related functional projections for subjects in the inflectional domain of the clause. In some instances the evidence involves movement or cliticization to these projections. This is the case in some Northern Italian dialects, for example, where local person subject clitics occur higher than negation, whereas 3rd person subject clitics occur below negation (Poletto 2000). The same goes for local person pronouns versus 3rd person pronouns in Hebrew sentences with the negator *'eyn* (Shlonsky 2000); Shlonsky explicitly argues that both positions are within the inflectional domain. In other instances the evidence comes from a split between two distinct loci for subject agreement, one for local person and one for non-local person. This is so, for instance, in Euchee, an isolate spoken in Oklahoma (Linn & Rosen 2003), in Athabaskan languages such as Slave (Rice 2000), and in Salish languages such as Lummi (Jelinek 1993) and Halkomelem (Wiltschko 2006). Finally, in some Romance varieties, the choice of auxiliaries is sensitive to the person of the subject (Kayne 1993, D'Alessandro & Roberts 2010). This pattern, too, may be explained by reference to person-sensitive subject-related functional projections (Coon & Preminger 2012).

Bianchi (2006) and Merchant (2006) posit that the heads in question are agreement heads specialized for particular person values. Adapting Bianchi's terminology slightly, I will refer to them as LocS, for local person subjects, and 3S, for 3rd person subjects.[32] A central idea in this domain is that person-based height differences among arguments, as we see in Northern Italian dialects, Hebrew, and Salish, arise because LocS-P is higher than 3S-P. This will be depicted in the trees below.

Person-sensitive phrase structure in the inflectional domain paves the way for an analysis in the general tradition of those developed by Jelinek (1993), Nash (1997), and Merchant (2006). All subject arguments must enter into a syntactic relationship with the appropriate subject-related projection; so too, I assume, must coordinates within coordinated subjects. Now, this second assumption raises a technical challenge if the required relationship is a spec-head configuration with an appropriate licensing head (as for instance in Merchant 2006). In a subject coordination of two 3rd persons, neither coordinate obtains a spec-head relationship with a head outside the coordinate structure, but the corresponding sentences are nevertheless well-formed (see (43)-(44)). One response to this challenge would be to state separate positional requirements for subjects and for their coordinates – specifiers of appropriate heads in the former case, and coordinates within such specifiers in the latter case. This is essentially a disjunctive positional licensing requirement. I propose what I take to be a simpler alternative: what is required of subjects and their coordinates is merely agreement with a licensing head, understood as a transitive relation. In a coordination of two 3rd persons, 3S agrees directly with the overall coordinated DP in person features. The individual coordinates agree with the overall containing DP (possibly via its head, &); this allows them to share features indirectly with 3S, satisfying the agreement requirement.[33] I return below to the consequences of this agreement relationship for case assignment.

(59)

A parallel syntactic situation obtains when local person arguments are coordinated. The overall coordination agrees with LocS directly; both individual coordinates agree with LocS indirectly. All subjects and coordinates thereof agree, directly or indirectly, with the appropriate person-related head, and the result is well-formed.

The situation is different when local and non-local persons are coordinated. As a local person DP, the overall subject coordination agrees with LocS; both coordinates thus agree indirectly with LocS, rather than 3S. The result does not conform to the requirement that all subjects and coordinates thereof agree with appropriate person-related heads, in view of the presence of the 3rd person coordinate.

(60)　*　LocS-P

（tree diagram: LocS-P branches into LocS and 3S-P; 3S-P branches into 3S and vP; vP branches into DP: [1pl] and v … ; DP: [1pl] branches into DP [1sg] and (& ... DP [3sg]); dashed lines connect LocS to DP: [1pl]）

This pattern sheds light on the status of person-related functional projections for objects, as proposed by Bianchi (2006) and Merchant (2006).[34] Recall that coordinations of local and non-local objects are perfectly grammatical in Nez Perce.

(61)　Jím-nim hi-náac-’yax̂-n-a　　　　　　　’íin-e　　kaa Mátt-na
　　　Jim-ERG 3SUBJ-O.PL-find-PERF-REM.PAST 1SG-ACC and Matt-ACC
　　　cepéeletp’et-pe.
　　　picture-LOC
　　　Jim found me and Matt in the picture.

This behavior makes sense if objects agree with a functional projection capable of agreement with both local and non-local person DPs. The asymmetry between subject and object coordinations reflects a greater degree of person specialization in the domain of subject agreement projections, and a lesser degree in the domain of object agreement projections.

We can now address the central question of how person-sensitive phrase structure for subjects interacts with ergative case. In Deal 2010a,b, I argue that

ergative behaves as a structural case in Nez Perce, rather than as an inherent case assigned by v to its specifier. I propose therefore that [ERG] is assigned by 3S in the transitive clause.[35] LocS assigns only [NOM]. The modifier facts follow straightforwardly. In (62), the 3rd person subject receives an [ERG] feature from 3S; ergative is realized both on the modifier (by case concord) and on the head noun. In (63), by contrast, there is no 3rd person subject and thus no agreement with the head 3S. The subject agrees instead with LocS, which assigns it a [NOM] feature. There is no source for ergative case on the modifier of the subject.

(62) Yú's-nim 'iceyéeye-nm, wéet'u minma'í 'itúu-ne
poor-ERG coyote-ERG   NEG   PRT   what-ACC
pée-p-se-∅.
3/3-eat-IMPERF-PRES
Poor Coyote isn't eating anything.

(63) Yu'c   / *yú's-nim *pro*,   wéet'u q'o minma'í 'itúu-ne
poor.NOM / *poor-ERG PRO.1SG NEG   PRT PRT   what-ACC
'ee-pí-se-∅.
3OBJ-eat-IMPERF-PRES
Poor me isn't eating anything.

Case in subject coordinations also follows straightforwardly. Given the agreement requirement imposed on subjects and coordinates thereof, the only well-formed coordinated subjects are those that include only local person coordinates or only 3rd person coordinates. The former agree with LocS and receive nominative, (64). The latter agree with 3S and receive ergative, (65). Agreement within the coordination has the result that case features are shared with each individual coordinate.[36]

(64) 'Iim   'íitq'o 'iin   kíye   'e-pe-múu-no'qa
2SG.NOM or   1SG.NOM 1PL.INCL.CLITIC 3OBJ-S.PL-call-MODAL
Ángel-ne   'íitq'o Tátlo-ne
Angel-ACC or   Tatlo-ACC
You or I should call Angel or Tatlo.

(65) Kátie-nim kaa Hárold-nim pée-'pewi-six-∅   Múna-ne.
Katie-ERG and Harold-ERG 3/3-look.for-IMPERF.PL-PRES Muna-ACC
Katie and Harold are looking for Muna.

The syntax of person in Nez Perce thus comes down to two major factors. First, local and non-local person subjects and coordinates thereof are required to agree with separate person-related heads. This has the result that coordinations mixing local and non-local persons are not acceptable as subjects. Second, the head responsible for assigning the ergative case feature is person-related. Local person subjects are never assigned an [ERG] feature in the syntax.

This analysis points up several dimensions which may be subject to crosslinguistic variation. First is the possibility of phrase-structural variation, as emphasized by Bianchi (2006); languages may differ in the extent to which they project articulated person-sensitive functional categories. A language lacking such projections presumably would not have the syntactic type of person-based ergative split, though it may still have the morphological type of split ergativity. Second is the possibility of variation in the cases assigned by person-sensitive heads. In various of the languages for which such heads have been posited, case is on a strict nominative-accusative basis. This suggests that 3S may assign [NOM] in transitive clauses in some languages and [ERG] in transitive clauses in others. If the same goes for LocS, then an ergative language with no person-based split, or a split of the purely morphological type, might differ from Nez Perce not in its hierarchical structure, but in the cases assigned by elements therein: both 3S and LocS assign [ERG]. Evidence for such a language could come from person-sensitive word order, placement of agreement morphology, or auxiliary selection, coupled with the absence of person-based split ergativity or coordination/modification data suggesting a morphological basis for such a split.

6. CONCLUSIONS

Close comparative studies of ergative languages have shown repeatedly over the last two decades that ergativity is not a unified phenomenon.[37] A similar conclusion has been drawn in comparative studies of differential argument marking.[38] The findings of this paper contribute to a picture of the diversity lurking behind preliminary diagnoses such as 'split ergativity'. What is *prima facie* the same type of split ergativity may arise by morphological means in some languages but by syntactic means in others.

This conclusion raises a serious question concerning the status of hierarchy effects in grammar. Why should the same distribution of ergative and nominative arise by different mechanisms in different languages? Why should some languages do by morphological means the exact same thing that other languages do with person-sensitive assignment of abstract case features? A deeper fact must be at stake on the relative markedness of the various person features, outside of the particular vocabulary of any one grammatical module. It therefore seems to me quite reasonable to conclude that hierarchy effects ultimately must arise external to the grammar itself, from the organization of human cognition and communication – a conclusion in line with various approaches that locate the origin of these effects extra-grammatically (i.a. Silverstein 1976, Dixon 1979, DeLancey 1981, Newmeyer 2002, Haspelmath 2008). Beyond diversity in the status of patterns like person-based split ergativity, the extra-grammatical origin of hierarchy effects has the potential to explain why hierarchy effects come into grammar to such a variety of degrees. Languages may fail to encode hierarchy effects in case-marking, or in various instances, show patterns directly contrary

to the hierarchy (Filimonova 2005, Bickel & Witzlack-Makarevich 2008, Legate 2014). This is in addition to the fact that when languages do show hierarchy effects, multiple distinct types of mechanisms may be involved. All this would not be expected if hierarchy effects emerged from universals hard-wired in a unified way into the basic structure of grammatical systems.[39]

I note in closing that this approach to the status of hierarchies echoes Chomsky (2005)'s view of language design as arising from the confluence of an extremely simple UG component with a range of Language-independent, 'third factor' effects, some of them representing aspects of general human cognition. From this point of view, the study of hierarchy effects and their variation belongs not to the study of UG proper, but to the investigation of how narrow UG principles interact with broader mechanisms to produce grammatical diversity.

APPENDIX

Nez Perce orthographic conventions

The orthographic conventions in this paper follow IPA usage with a small number of exceptions. Long vowels are indicated with digraphs, e.g. [aa]. Main stress is indicated with an acute accent. Glottalization is indicated with an apostrophe. In addition:

(66)   Differences between practical orthography and IPA

Orthography	IPA
e	æ
y	j
x̂	χ
'	ʔ
c	ts

A thorough guide to the various orthographic systems used for Nez Perce since the missionary period may be found in Crook (1999: 35-47).

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FOOTNOTES

1 The following abbreviations are used in Nez Perce glosses: 3/3 3rd person subject and 3rd person object portmanteau agreement, 3OBJ 3rd person object agreement, 3SUBJ 3rd person subject agreement, ACC accusative (glossed 'objective' in Aoki 1970, 1994, Crook 1999 and Deal 2010a,b, and 'DO' in Rude 1985, 1986), APPL applicative, C complementizer, CISLOC cislocative, ERG ergative, HAB habitual, IMPERF imperfective, INCL inclusive, NEG clausal negation, NOM nominative, O.PL plural object agreement, PL plural, PERF perfect/perfective, PRES present tense, PRO null pronoun, PRT particle, REC.PAST recent past tense, REM.PAST remote past tense, RP relative pronoun, SG singular, S.PL plural subject agreement.

2 On the 2nd person clitics appearing in these examples, see the discussion around (16). These clitics do not affect case-marking and are generally optional.

3 This is so modulo the series of 'reflexive' pronouns in these languages, which lack an ergative in all persons.

4 The Sahaptian family includes Nez Perce along with Sahaptin languages spoken throughout the Columbia Plateau region. This uncontroversial family is commonly attributed to the much

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more tentatively established Penutian stock, following Sapir (1929); see Silverstein (1979) and DeLancey & Golla (1997) for critical discussion.

5 The language also allows notionally transitive clauses in which both arguments are nominative. As discussed at length in Rude 1985, 1986, Deal 2010a, and especially Deal 2010b: pp. 188-423, this clause type arises when either the object is a weak indefinite or the subject binds the possessor of the object. This pattern holds regardless of the person of the subject, and so is set aside here.

6 Note that the use and combination of these affixes is subject to various additional restrictions not represented here. For instance, 3/3 portmanteau *pee* does not co-occur with other prefixes (Crook 1999), and object plural marker *nees* cannot be controlled by plural 2nd person objects (Deal To appear). These and other restrictions are discussed by Deal (To appear); see note 26 for further discussion.

7 Further allomorphs of the various cases are discussed by Aoki (1970: 72-75) and Rude (1985: 82-96). Note that further allomorphs are not reported to distinguish ergative and genitive.

8 Nez Perce relative clauses are not nominalized, and they do not show case marking on the relative clause itself. See Deal (2014) for discussion.

9 These examples include cislocative suffix *-m*, used when the object is 1st person (see note 12) or when the verb describes an eventuality located near the speaker (Deal 2009a).

10 On applicatives and the hallmarks of formal transitivity in Nez Perce, see Rude (1986).

11 Information-structural consequences of word order variation are discussed by Rude (1992).

12 Sentences with only local arguments are disambiguated by cislocative inflection, which is used nearly categorically when the subject is 2nd person and the object is 1st person. Additionally, 1st and 2nd person objects are disambiguated by number agreement in the plural, owing to interactions between person features and number agreement; see note 26.

13 Cross-linguistically, this type of syntactic ergativity is the most widely distributed type; ergativity in control, for instance, appears only in languages with syntactically ergative A' patterns, such as Dyirbal (Dixon 1994) and Seediq (Aldridge 2004). See Deal (2015) for discussion of this implication.

14 Example (23a) demonstrates the standard case pattern in ditransitives: ergative subject, accusative goal, and nominative theme. This pattern is discussed by Deal (2013b).

15 It is not clear why this example does not include the plural subject form of imperfective aspect.

16 Additional possibilities have been explored for split ergative patterns in agreement. For instance, Wiltschko (2006) proposes for Halkomelem that agreement which may apply only to transitive subjects (yielding an ergative pattern) is overt only for 3rd person, whereas agreement which may apply to all subjects (yielding a nominative pattern) is typically overt only for local persons. As on other morphological views, the key role is played by (c)overtness in morphological paradigms, rather than by person-sensitive syntactic devices. See especially Wiltschko 2006: 217-8.

17 This is the more important of two mechanisms discussed by Deo & Sharma 2006; an additional constraint ranking penalizes the presence of an abstract ergative case feature on a nominal which is not realized with overt ergative morphological case.

18 Such a view is compatible with but not does require a separation between morphological and syntactic components of grammar, and the corresponding distinction between syntactic case assignment and morphological case realization. For Aissen (1999), for instance, case-marking is determined as part of a mapping between "a predicate-argument structure, with (proto) semantic role, relative discourse prominence, and person of each argument specified" and "syntactic realization" (p. 685); no explicit distinction is drawn between this output and morphological form.

19 For Deo & Sharma (2006) this effect is closely connected to a morphological constraint ranking. See note 17.

20 This is somewhat of a simplification of Merchant's view, which posits that local person subjects transit through positions in which *both* [ERG] and [NOM] are assigned. [NOM] is realized at PF

21 The third diagnostic, syntactic ergativity, is set aside here because Nez Perce is not syntactically ergative.

22 Exceptions are possible on Merchant (2006)'s view. See Merchant (2006: 70), Legate (2014: 207) for discussion.

23 Marathi glosses follow the original sources, with one exception: Dhongde & Wali (2009) do not explicitly gloss nominative on local person subjects. The following additional abbreviations are used: DAT dative, NSG neuter singular, NPL neuter plural.

24 See Deo & Sharma (2006: §4.1) for additional evidence of this fact from a slightly different modification construction in Marathi.

25 Note that the predictions outlined here differ in various ways from those reviewed by Legate. Thanks to an anonymous reviewer for comments on the predictions discussed here.

26 In Nez Perce, for instance, person values are fully distinguished in the plural by object agreement. 1st person plural objects control plural prefix *nees* but never an overt person agreement marker. 3rd person plural objects control *nees* along with person agreement marker *'e*, when the subject is 1st or 2nd person. (They control no person marker when the subject is 3rd person; in this case the single person 'slot' is filled by 3rd person subject agreement, and there is no morphological difference between a 3rd person plural object and a 1st person plural object.) 2nd person plural objects never control any overt agreement marker, whether for person or number. On this diagnostic, the coordination of 1st and 3rd person behaves like a 1st person plural in controlling only number agreement, (i); the coordination of 2nd and 3rd person behaves like a 2nd person plural in controlling no agreement, (ii); the coordination of 3rd and 3rd person behaves like a 3rd person plural in controlling both number and person agreement, (iii). (Note that *nees* and *'e* appear in harmonized forms *naac* and *'a* in these examples. See Deal & Wolf (In press) for discussion.)

(i) *Pro* 'ee náac-'yaax̂-ni-m-a 'iin kaa Mátt-ne
PRO.2SG 2SG.CLITIC O.PL-find-P-CISLOC-REM.PAST 1SG.NOM and Matt-ACC
cepéeletp'et-pe.
picture-LOC
You found me and Matt in the picture.

(ii) *Pro* 'eetx 'iyáax̂-n-a 'iim kaa Mátt-ne cepéeletp'et-pe.
PRO.1SG 2PL.CLITIC find-P-REM.PAST 2SG.NOM and Matt-ACC picture-LOC
I found you and Matt in the picture.

(iii) *Pro* 'a-náac-'yaax̂-n-a Matt kaa Jím-ne cepéeletp'et-pe.
PRO.1SG 3OBJ-O.PL-find-P-REM.PAST Matt.NOM and Jim-ACC picture-LOC
I found Matt and Jim in the picture.

Note that the 2nd person plural clitic *'eetx* in (ii) provides further evidence that the combination of 2nd and 3rd person behaves as 2nd person plural.

27 This presupposes, following Sag et al. (1985) but *contra* Chomsky (1957: 36), that coordinations of unlike categories may be grammatically well-formed to begin with. See Johannessen (1998: ch 4) and Zhang (2010: ch 3) for discussion of the categorial status of such coordinations.

28 Absent here is a version of the specialized v view (27iv). For Carnie 2005 and Alexiadou & Anagnostopoulou 2006, local person subjects receive their Case from T in a split ergative system, rather than from v. We might suppose that Case is assigned directly to the overall coordinated DP, and percolates down to the individual coordinates; the coordination of 1st and 3rd person is thus an overall DP that agrees with T (given that it is 1st person plural), and the feature received from T percolates to the 3rd person coordinate. It is not clear to me that a requirement on the individual 3rd person coordinate may be imposed that bars this type of agreement or Case assignment, given that 3rd person coordinates of subjects would be taken to agree with and receive Case from T (under percolation) in intransitive clauses.

29 This is a possibility acknowledged by Legate, who writes of her language sample that "languages are chosen based on availability of relevant data. Additional data on other languages may reveal the need to recognize a dichotomy between languages that pattern like those discussed here, in which the split has a morphological source, and languages that pattern differently, in which the split has a syntactic source. We would consider that an interesting result, but as of yet, we have found no such languages" (2014, fn. 9).

30 This example shows a vowel harmony pattern which indicates that the pronoun and modifier form a single phonological word. Harmony in Nez Perce contrasts a dominant set of vowels, /a o/, with a recessive set, /e u/ (see i.a. Aoki 1966, Crook 1999, Deal & Wolf In press). Recessive vowels change to the corresponding dominant vowel when a dominant vowel is present elsewhere in the word. In (39), the pronoun root is *nun*, which harmonizes to *non* when *ciwáatx̂* is added. The speakers consulted for this project do not have vowel harmony with full productivity, but they maintain it in certain forms.

31 Example (55) was marked as fully acceptable in the initially circulated version of this paper, suggesting a status on par with examples like (43) or (44) (where two 3rd persons are coordinated). I now believe this to have been a misinterpretation of speaker reactions, and in the interest of clarity concerning the data, I will describe the rationale behind the intermediate judgment mark '?'. On one hand, the status of sentences like (43)-(44) is clear: speakers reliably produce such structures in translation from English, and they judge linguist-constructed sentences of this type to be well-formed. Also clear is the status of sentences like (53), which speakers both fail to produce in translation and firmly reject in judgment tasks. (One speaker commented that (53) "sounds like someone just learning how to talk, just piecing words together.") Examples like (55) have an intermediate status. In translation tasks, speakers avoid this sentence type. Asked to translate colloquial English *Me and my friend are happy* into Nez Perce, for instance, two speakers each gave two versions of the Plural Pronoun Construction (varying in word order and lexical choice); neither speaker provided or audibly considered any structure with a coordinated subject. Both speakers did accept linguist-constructed sentence (55), however. These findings are closely parallel to findings on transitive sentences like (54), which are also avoided in translation tasks but accepted in judgment tasks (sometimes with hesitation or remarks on the superiority of Plural Pronoun Construction variants). I believe this intermediate status can be explained as an effect of language contact, as described in the text.

32 For Bianchi, the projection of a single head for local persons holds as one of two parametric options instantiated in Italian idiolects; alternatively, specific heads may be projected for 1st and 2nd person. This latter option corresponds to the proposal by Merchant.

33 On indirect agreement and the transitivity of agreement, see Legate (2005), Bhatt (2005), Deal (2009b).

34 For Bianchi, the presence of separate person-linked heads for subjects and for objects is a parametric choice correlated with the presence of subject agreement. Since Nez Perce has subject agreement, it would be expected in Bianchi's system to have separate subject and object person agreement heads.

35 In Deal 2010a,b, the transitivity condition is captured by treating ergative as arising when *both* an inflectional head and transitive v agree with a particular DP. This idea can be represented schematically by thinking of the syntactic ergative feature as decomposed into two more fundamental syntactic features $[\alpha, \beta]$, one assigned by transitive v and one assigned by 3S. On this approach, the [ERG] feature in the text should be understood as representing only half of the syntactic ingredients to ergative case, viz. that half contributed by 3S. The other half is contributed to all transitive subjects (and coordinates thereof) by transitive v. Local persons receive only the features of transitive v, not the features of 3S, when they serve as transitive subjects. Thus they do not have ergative case, understood as *both* the α and β features. The same goes for 3rd person subjects in intransitive clauses, which receive the features of 3S but not the features of transitive v.

36 I take no particular stand here on the status of the unbalanced coordination option for examples like (65), wherein the first coordinate appears in the nominative case.

37 See Johns (2000), Legate (2008), Deal (2015) and references therein.

31

38 See Legate (2006) on differences between systems of object marking, and de Hoop & Malchukov (2008), Malchukov (2008) on differences between object marking and subject marking.

39 This is not to suggest that syntactic patterns such as the placement of LocS above 3S are not universal; they may well be. The point is that such universal syntactic patterns, if they exist, should not be looked to for a final, unifying explanation for all hierarchy effects. Rather, there is a grammar-external source which explains both the relevant syntactic universals (if they exist) and other, independent types of hierarchy effects in language.