14. HEAD DIRECTIONALITY

(1) The Head Directionality Parameter (Baker 2001:68)
a. Heads follow phrases in forming larger phrases (in Japanese, Lakhota, Basque, Amharic, …)
b. Heads precede phrases in forming larger phrases (English, Edo, Thai, Zapotec, …)

English vs. Japanese:

(2) a. eat — an apple
b. tabe-ru — ringo-o
apple-ACC eat-NONPAST

VO correlate	**OV correlate**
adposition - NP	NP - adposition
copula verb - predicate	predicate - copula verb
'want' - VP	VP - 'want'
tense/aspect auxiliary verb - VP	VP - tense/aspect auxiliary verb
negative auxiliary - VP	VP - negative auxiliary
complementizer - S	S - complementizer
question particle - S	S - question particle
adverbial subordinator - S	S - adverbial subordinator
article - N'	N' - article
plural word - N'	N' - plural word
noun - genitive	genitive - noun
noun - relative clause	relative clause - noun
adjective - standard of comparison	standard of comparison - adjective
verb - PP	PP - verb
verb - manner adverb	manner adverb - verb

Correlation pairs reported in Dryer 1992
Table 1

Baker's formulation implies that Articles are heads of NPs (or DPs), as in much current work, rather than 'specifiers':

(3) John found that letter under the bed

(4) John wowapi k'ų̨he oyų̨ke ki ohlate iyeye (Lakhota)
John letter that bed the under found

Chinese PS in Huang 1994. Chinese is consistently head final except in rule expanding X' to X^0 (if head is verbal it precedes the complement):

(5) a. tā pian-le Lisi V-NP (Huang 1982)
he cheat-ASP Lisi
'He cheated Lisi'

b. but NP-N (offer -refusal)

(6) a. XP —> YP X'
b. X' —> YP X'
c. X' —> c'. X^0 YP iff X = [+v]
c''. YP X^0 otherwise

Travis 1989: The Headedness Parameter not enough — problem of variant orders. PP can both precede and follow V

(7) cóng yōu gú chūlai PP-V (locative PP) (Chinese)
from dark valley emerge
'emerge from a dark valley'

(8) zhāng-sān tiào zài zhuōzi-shang V-PP (directional PP)
Zhang-san jump at table-on

In Kpelle, within the VP, objects precede the verb, while PPs follow the verb:

(9) gallon a pɛ́rɛ tɔ̂i
chief AGR house build
'The chief is building a house'

(10) e pa dipɔ
he come them-to
'He came to them'

(11) e sɛŋ-kâu tèe ƙâloŋ-pɔ́
AGR money sent chief-to
'He sent money to the chief'

(12) Possible orders of V, direct object, complement PP_1, and adjunct PP_2

a. PP_2 PP_1 NP V
b. PP_2 PP_1 V NP
c. PP_2 NP V PP_1
d. PP_2 V NP PP_1
e. PP_1 NP V PP_2
f. PP_1 V NP PP_2
g. NP V PP_1 PP_2
h. V NP PP_1 PP_2

3 parameters derive all of (12a-h): Directionality of headedness, theta, and Case

	HEADEDNESS	THETA	CASE	LANGUAGE
a.	final	left	left	Japanese
b.	final	left	right	Chinese (future)
c.	final	right	left	*
d.	final	right	right	Chinese (present)
e.	initial	left	left	Kpelle (past)
f.	initial	left	right	*
g.	initial	right	left	Kpelle (present)
h.	initial	right	right	English

Combinations of the headedness, direction of theta-role assignment, and direction of case assignment parameters (Travis 1989)
Table 2

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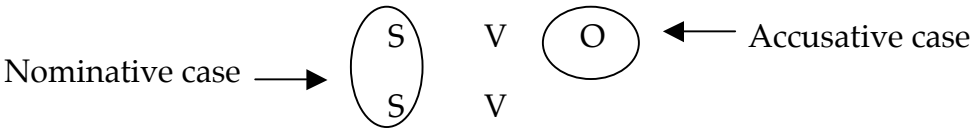
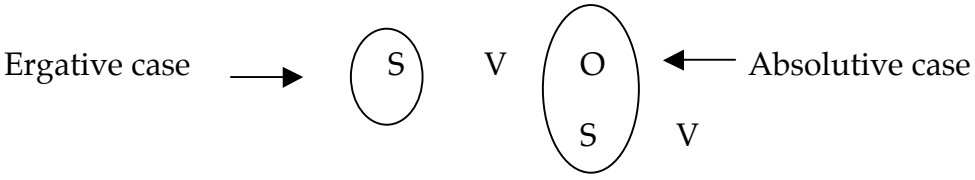
15. Ergativity

(1) a. Nominative-Accusative languages:

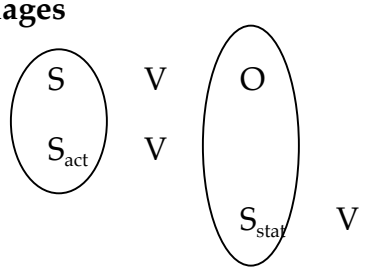


(2) b. Ergative-Absolutive languages:



Active vs. stative languages

(3)



Morphological vs. syntactic Ergativity

Morphological Ergativity (Chuckchi; Comrie 1989: 104):

(4) a. ɣəm tə-yet-ɣʔek
I-ABSOLUTIVE came-1 SINGULAR
'I came'

b. ɣəm-nan ɣət tə-lʔu- ɣət
I-ERGATIVE thou-ABSOLUTIVE saw-1 SINGULAR-2 SINGULAR
'I saw thee'

(5) a. ki-Ø-r-tix kinaq'lq ačeŋ (Sacapultec Maya; Du Bois 1987)
INC-3:ABS-3SG:ERG-eat bean the man
'the man eats beans'

b. š-e:pe: e: išeb' al''?-o:m
COMP-3PL:ABS-come PL three boy-PL
'three boys came'

Syntactic Ergativity (Dyirbal; Comrie 1989: 112):
Syntactic processes treat Absolutive case uniformly

(6) a. balan dʸugumbil baŋgul yaṛaŋgu balgan
woman-ABSOLUTIVE man-ERGATIVE hit
'the man hit the woman'

b. bayi yaṛa baninʸu
man-ABSOLUTIVE came-here
'the man came here'

c. balan dʸugumbil baninʸu
woman-ABSOLUTIVE came-here

d. balan dʸugumbil baŋgul yaṛaŋgu balgan, baninʸu
'the man hit the woman [and] came here'
INTERPRETATION: The *woman* came here

(7) But even syntactically ergative languages treat subjects uniformly for some processes (Dixon 1994: ch. 5):
a. Imperatives
b. Complements of *can, try, begin, want,* etc.
c. Reflexives
d. Anaphors

Split Ergativity
Some common factors involved in splits (Dixon 1979)
A. The semantics of the main verb: Erg/Abs when there is no control over the activity; Nom/Acc when there is control. (Bats, Estern Pomo)

B. The semantics of the NP arguments involved:

(8) Animacy Hierarchy (Silverstein 1976):

1st person>2nd person>3rd person>proper>human>animate>inanimate
pronoun pronoun pronoun noun common nouns

The left ('more animate') end is the Nom-Acc end
The right ('less animate') end is the Erg-Abs end
Different languages have different cutoff points

(9) Dyirbal (A=transitive subject; S=intransitive subject; O=transitive object)

	1st and 2nd	others
A	ø	-ngu
S	ø	ø
O	-na	ø

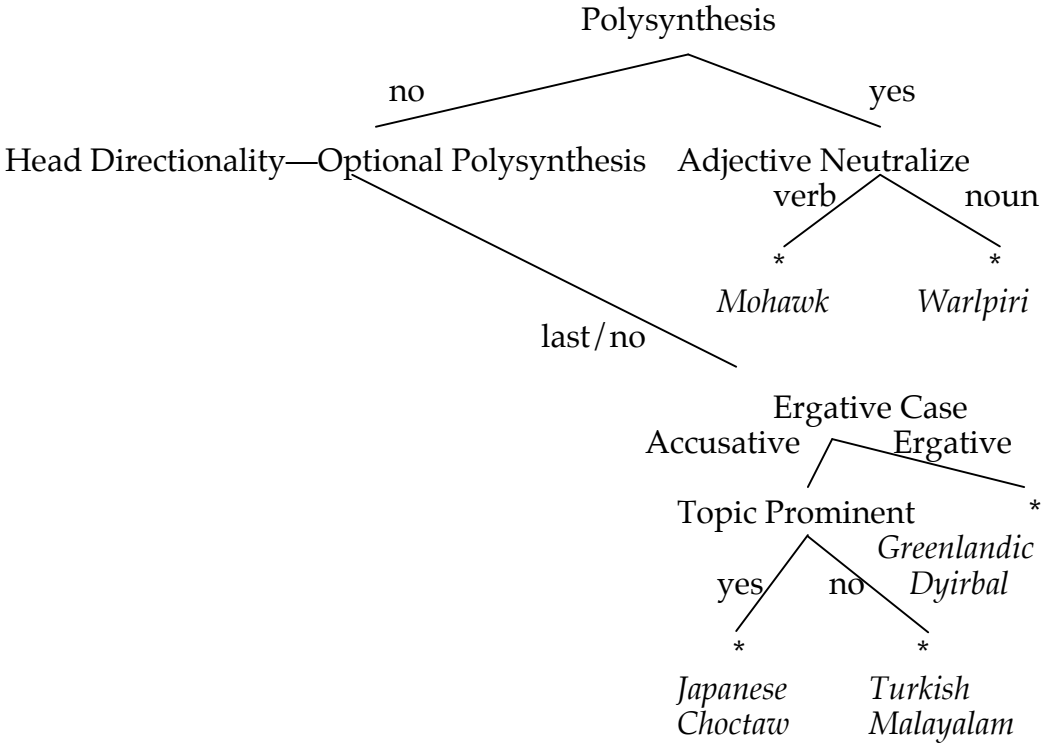
C. The tense/aspect of the sentence: Burushaski is Erg/Abs in the past and perfect; Nom/Acc otherwise. Tsimshian is Nom/Acc in main clauses; Erg/Abs in subordinate clauses.

Things can be even more complicated. There are case-agreement splits too. In the Aorist series for intransitive verbs, Georgian has Nominative-Accusative agreement, but Active-Stative case-marking (Lyle 1997):

(10) k'ac-**i** daimal-**a**
man-NOM hide-3sgAOR
'the man hid'

(11) k'ac-**ma** it'ir-**a**
man-ERG cry-3sgAOR
'the man cried'

(12)



Most ergative languages reported in Nichols 1992 are head-final. But some are not:

(13) a. Ergative and verb-medial: Djingli, Ungarinjin, Yokulta
b. Ergative and verb-initial: Chamorro, Drehu, Giksan, Lower Umpqua, Sahaptin, Wishram, Tzutujil

Note that the best-studied of these are verb-initial (including a number of Polynesian languages not on Nichols's list)

Some have claimed that only 'verb-peripheral' languages can be ergative (Schwartz 1972; Mahajan 1997; Trask 1979)

(14) The Ergative Case Parameter (Baker 2001: 180-181):
a. The case marker on all subjects is the same (Japanese, Turkish, Quechua).
b. The case marker on the subject of an intransitive verb is the same as the case marker on the object of a transitive verb (Greenlandic, Dyirbal, Basque).

(15) Juuna ilinniartitsisu-siurpuq (Greenlandic; Baker, p. 180)
Juuna teacher-seek
'Juuna is looking for a teacher'

Formal treatments of Ergativity

Earliest analysis — explored relation (historical & synchronic) between Ergativity & passives (Hale 1973; Anderson 1976; Anderson 1977; Chung 1977)

(16) Hale (1970) — 3 types of ergative languages
a. Pseudo-ergative: Passive is obligatory
b. Passive-ergative: Agent is generated in VP and object in subject position
c. Active-ergative: Agent is base-generated in subject position and gets ergative case; object gets nominative case in the VP

Classes of analysis of Ergativity

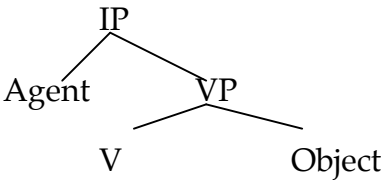
I. The key difference is thematic

Marantz 1984, which handles only syntactic Ergativity: Accusative and ergative languages project their arguments differently

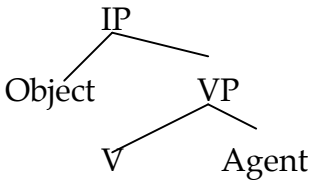
Acc languages — the Agent argument is external
Erg languages — the Patient argument is external

(17) Ergative Parameter (Marantz 1984):

a. Accusative languages



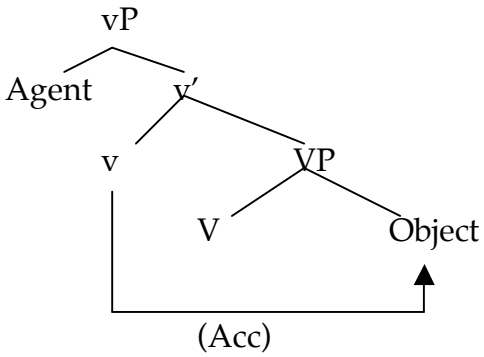
b. Ergative languages



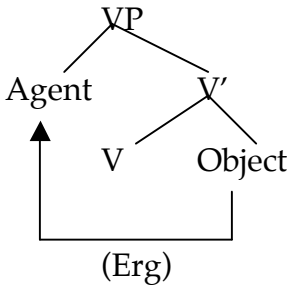
PROBLEM: Can't identify a uniform class of 'subject' (e.g. for reflexive binding)
Against the trend of 'UTAH' (Baker 1988)— same deep position for semantically-parallel arguments

(18) Internal Ergative Subject Hypothesis (Nash 1996):

a. Accusative languages



b. Ergative languages



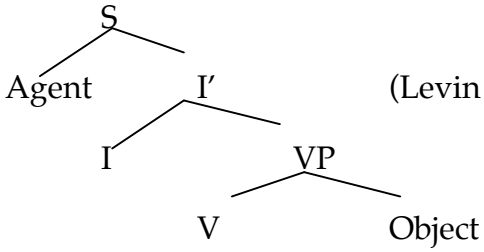
In accusative languages, the subject of a transitive is a specifier of a light verb that assigns accusative case.
Ergative languages lack this morpheme, so external arguments are generated internal to VP, where they are assigned ergative (a lexical case)

This analysis avoids some of the problems with Marantz's, but still violates UTAH

Levin 1983's discussion of active-stative languages — she relates this to unaccusative hypothesis (note that active-stative corresponds pretty well to unergative-unaccusative)

II. The key difference is case-related

(19)



(Levin and Massam 1985)

(20) There are two structural case assigners:
a. I assigns Nom in Nom-Acc languages and Erg in Erg-Acc languages
b. V assigns Acc in Nom-Acc languages and Abs in Erg-Acc languages

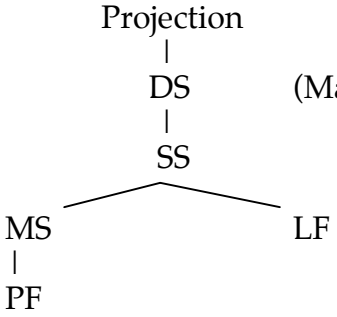
(21) Case Parameter (Levin and Massam 1985):
a. I is the obligatory case-assigner (accusative languages)
b. V is the obligatory case-assigner (ergative languages)

PROBLEM: Nominative is structurally equivalent to ergative and accusative to absolutive. This is odd, since we would expect the two morphologically-unmarked cases (Nom and Abs) to correspond

For a 'minimalist' updating of Levin & Massam, see Bobaljik 1993

First paper to distinguish case-Ergativity from agreement-ergativity (Marantz 1991) — Marantz 1991 proposes 'Morphological Structure' (MS) — a level of representation between S-Structure and PF:

(22)



(Marantz 1991)

Accusative and ergative are 'dependent' cases — that is, their assignment depends on the presence of a second NP

(23) Marantz's Parameter:
- a. Dependent case is assigned up to subject (ergative)
- b. Dependent case is assigned down to object (accusative)

Agreement is assigned by different principles

PROBLEM: Marantz's proposal is incompatible with MP assumptions, in that language-particular variation is not lexical, case and agreement are not intimately linked, and it has an extra level of representation

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First attempt to handle split Ergativity — Mahajan 1994

Connection between Ergativity and perfectivity

— which he relates to *have*/*be* alternations

(24) perfective *have* = *be* + [$_P$] (Mahajan 1994)

So compare and ergative language and an accusative language:

(25) a.

raam-ne	vah	kitaabe	paru	thu	(Hindi)
Ram-erg	those	books	read-perf	be-past	

'Ram had read those books)

b.

Paul	les	a	repeintes	(French)
Paul	them	has	repaint-perf	

'Paul has repainted them'

(26) The two languages have different options for the empty P:
  a. French: it incorporates with *be* to form *avoir*
  b. Hindi: it is spelled out as the ergative case marker

This explains why ergative languages typically lack a verb corresponding to *have*

PROBLEM: It handles only a very restricted form of split ergativity

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Chomsky has given the most direct — and most oversimplified characterization of ergativity:

> Suppose that VP contains only one NP. Then one of the two Agr elements will be 'active' (the other being inert or perhaps missing). Which one? Two options are possible: Agr_S or Agr_O. If the choice is Agr_S, then the single NP will have the properties of the subject of a transitive clause; if the choice is Agr_O, then it will have the properties of the object of a transitive clause (nominative-accusative and ergative-absolutive languages, respectively). These are the only two possibilities, mixtures apart. The distinction between the two language types reduces to a trivial question of morphology, as we expect. (Chomsky 1993: 9)

The idea is a simple one — the feature-checking mechanism treats NPs in intransitive sentences differently. Essentially — in ergative languages intransitive subjects are treated like objects. Everything else is supposed to follow from this. But this accounts for only small part of Ergativity!

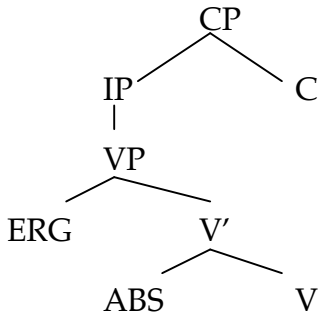
In most minimalist accounts:

(27) 2 parameters at work in erg. languages (true of most formal accounts):
  a. One determining the difference in case-marking
  b. One distinguishing syntactically from morphologically ergative languages

Otherwise — huge differences (see Johns 1996 for detailed discussion)

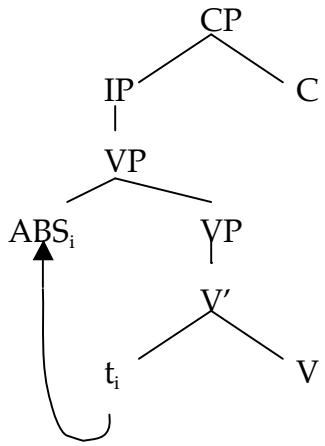
Morphological and syntactic ergativity (loosely adapted from Bittner and Hale 1996)

(28) a. Morphological Ergativity (transitives)

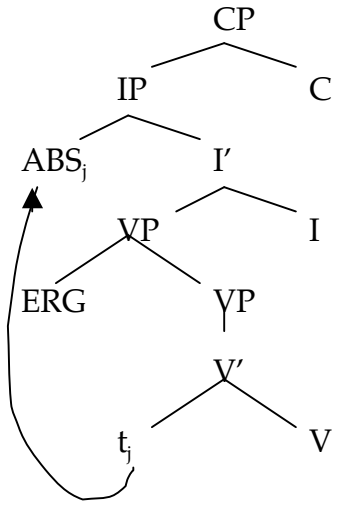


(ERG is higher than ABS)

b. Morphological Ergativity (intransitives)

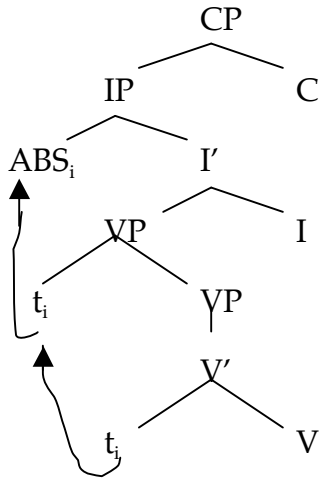


(29) a. Syntactic Ergativity (transitives)



(ABS is higher than ERG)

b. Syntactic Ergativity (intransitives)



For other minimalist approaches, see Murasugi 1992 and Lyle 1997. The latter takes on the problem of split ergativity and case/agreement differences in ergativity

%%%%%%%%%%%%%%%%%%%%%%%%%%%%%

Topic prominence' on Baker's Parameter Hierarchy applies (yes or no) only to head-final, non-ergative languages. He gives Japanese as a typical topic-prominent language:

(30) a. John wa sono hon-o yonda
John TOPIC that book-OB read
'John read the book'; 'Speaking of John, he read the book'

b. kono hon wa John-ga yonda
this book TOPIC John-SU read
'Speaking of this book, John has read it'
[shows that the topic need not be the subject]

c. sakana wa tai-ga oisii
fish TOPIC red snapper-SU delicious
'[speaking of] fish, red snapper is delicious'
[shows that the topic need not correspond to anything in the base sentence]

(31) The Topic-Prominent Parameter (Baker 2001: 182)
a. A sentence may be made up of an initial noun phrase (the topic) and a complete clause that is understood as a comment on that topic (Japanese).
b. No topic phrase distinct from the clause is allowed (English).

(32) Some questions raised by Baker's analysis:
a. Is it really only OV languages that manifest topic-prominence? Is Chinese OV? Baker cites Li and Thompson on topic-prominence being a feature of head final-languages.
b. Doesn't Baker need some default statement somewhere that head-initial languages will *not* be topic-prominent?
c. What about sentences of English (and other languages) that do manifest the features of 'topic-prominence'?:

(33) As for fish / Speaking of fish / Where fish is concerned, I'll choose red snapper any day.

Might it not be the case that all (most?) languages allow topic-prominent constructions to some degree? If so, then there might be no EITHER-OR parameter. Such would be damaging to the entire parametric approach.

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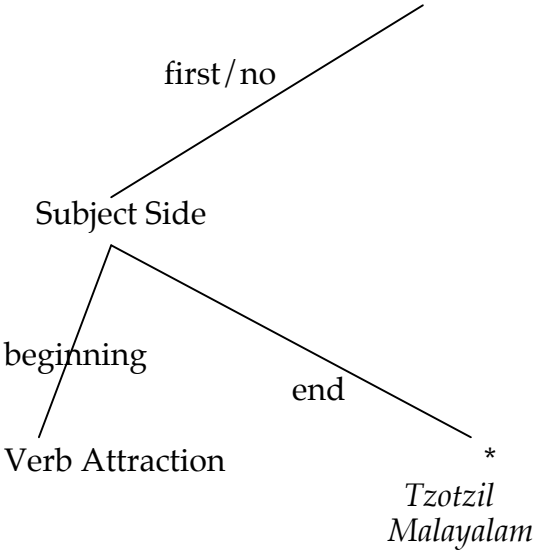
16. THE SUBJECT SIDE PARAMETER

(1) Head Directionality—Optional Polysynthesis



So a parameter (never stated) allows the subject to precede or follow the object

Tzotzil & Malayalam are VOS (maybe 3% of world's languages)

What about OVS and OSV languages?

OSV languages are excluded by:

(2) Verb-Object Constraint (Baker 2001: 93):
The object of a verb must be the first noun (phrase) to combine with the verb; the subject cannot combine with the verb until the object does.

OVS languages:

> There is no way to get [OVS} order that is consistent with the verb-object constraint. Richard Kayne 1994: 36 takes this as evidence that object-verb-subject languages are not created by special word order parameters at all but instead by a kind of movement akin to the question movement discussed in Chapter 2. (Baker 2001: 166)

In other words:

(3) S [OV] -> [OV]S (Hixkaryana, etc.)

But it is not obvious *why* OVS order violates the Verb-Object Constraint

Indirect objects follow subjects:

(4) otweto yɨmyakonɨ rohetxe totokomo way (Hixkaryana)
hammock gave my-wife peopleto
'my wife used to give hammocks to the people'

One finds SOV order in nonfinite embedded clauses:

(5) to-wy wewe yamatxhe, ɨtehe harha owo hona
me-by tree after-felling I-go back villageto
'after I fell the tree, I will go back to the village'

More generally, if verb phrase movement is relatively rare (as seems to be the case), Kayne's proposal explains why languages like Hixkaryana are rare. (Baker 2001: 167)

(6) Some comments/questions on the Baker/Kayne analysis:

a. What is the precise difference between a 'rule' and a 'parameter'? Isn't saying that Hixkaryana has a special rule the same thing that it has a special parameter setting? This seems particularly true for current minimalist work, where both the instantiation of parameters and rules is carried out by feature strength/attraction.

b. The rarity of verb phrase movement does not 'explain' why languages like Hixkaryana are rare. Rather, it is just a way of *stating* that languages like Hixkaryana are rare.

c. Are Kayne and Baker assuming that the more rule applications a language has, the rarer the language type? That seems problematic.

d. What about a language that has OVS order as a rare variant (unlike Hixkaryana, where it is pervasive)? Does that language have the same VP-fronting rule as Hixkaryana? If so, haven't we lost the generalization about why languages like Hixkaryana are so rare?

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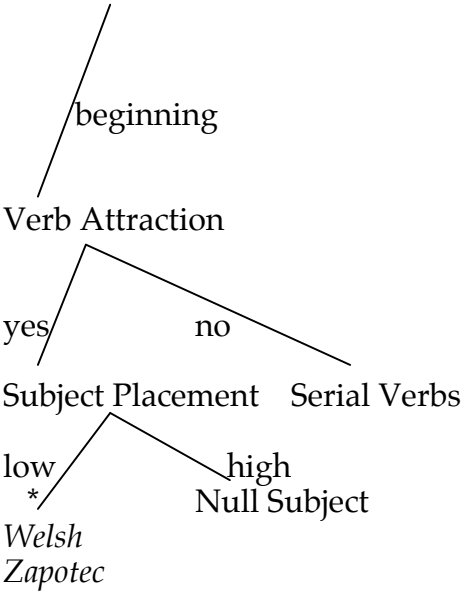
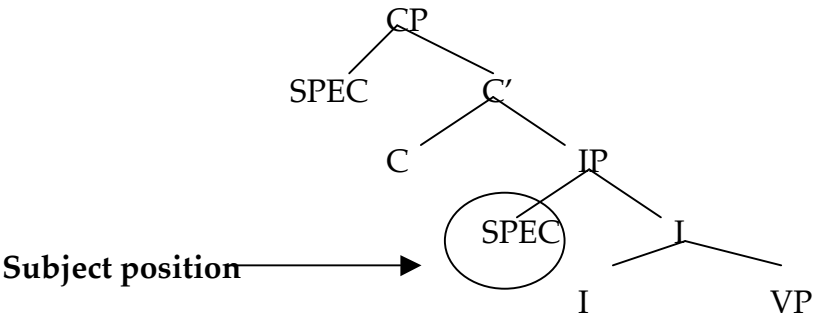
Kayne, Richard S. 1994. The Antisymmetry of Syntax, MIT Press, Cambridge, MA.

17. VERB ATTRACTION, SUBJECT PLACEMENT, AND THE VP-INTERNAL SUBJECT HYPOTHESIS

(1) Subject Side



(2) Mainstream work has usually defined subjects configurationally:
- a. NP immediately dominated by S (Chomsky 1965)
- b. The occupant of SPEC, IP (Chomsky 1986):



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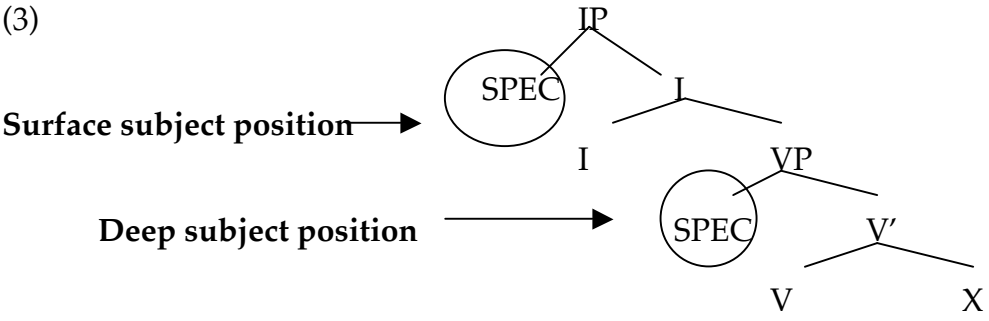


The VP-Internal Subject Hypothesis (Kitagawa 1986/1994; Zagona 1982/1988; Sportiche 1988)

Evidence for the VP-Internal Subject Hypothesis:

A. In some languages both positions can be overtly filled

Tagalog (Guilfoyle et al. 1992, based on earlier work by Schachter 1976). Schachter demonstrates that for Tagalog the properties most often associated with a single argument and identified as 'subject properties' can sometimes be split between two argument positions in certain constructions. For example, in (4) *babae* 'woman ' possesses all subject properties in (4a), while the subject properties are split in (4b) between *babae* and *bigas* 'rice'

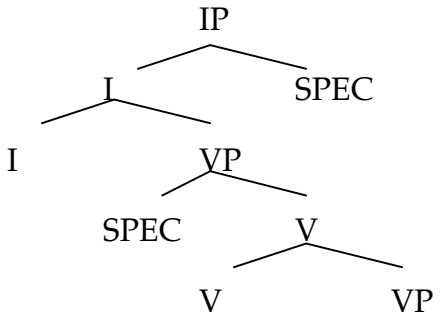
(4) a. Mag-aalis ng-bigas sa-sako para sa-bata ang-babae
AT-take.out ACC-rice OBL-sack for OBL-child TOP-woman
'The woman will take rice out of the sack for the child'

b. Aalisin ng-babae sa-sako para sa-bata ang-bigas
TT-take.out GEN-woman OBL-sack for OBL-child TOP-rice
'The woman will take the rice out of the sack for the child'

AT = agent topic; TT = theme topic. The other abbreviations are: TOP(ic), ACC(usative), OBL(ique), and GEN(itive).

Under GHT's analysis, Tagalog has the phrase structure shown in (5), where Spec,IP is rightmost and Spec,VP is leftmost:

(5)



The derivations of (4a) and (4b) are shown in (6):

(6) a. [$_{IP}$ mag-aalis$_2$ [$_{VP}$ t$_1$ t$_2$ ng-bigas sa-sako para-sa-bata] ang-babae$_{1\ IP}$]
b. [$_{IP}$ aalisin$_2$ [$_{VP}$ ng-babae t$_2$ t$_1$ sa-sako para-sa-bata] ang-bigas$_{1\ I_P}$]

In (6a), the VP-internal subject *babae* moves from Spec,VP (on the left edge of VP) to Spec,IP (at the end of the clause), thus filling both subject positions.
In (6b), *babae* remains in the Spec,VP subject position, while the theme *bigas* moves from object position to Spec,IP.
Role-related properties (reflexive antecedence and being controlled) go with the Spec,VP position. Reference-related properties (floating quantifiers and extraction) go with the Spec,IP position. When a single argument fills both positions (via movement), as is the case for *babae* in (6a), that argument exhibits all subject characteristics. In (6b), however, the deep subject *babae* originates in

Spec,VP and remains there at S-structure, while the object *bigas* moves out of the VP complement position coming to occupy the surface subject position spec,IP at S-structure. Accordingly, the subject properties in (6b) are split between these two arguments.

*B. In some languages **part of** the VP-Internal Subject can be left behind*

Quantifier float in French (Sportiche 1988):

(7) a. Tous les enfants ont vu ce film
all the children have seen this movie

b. Les enfants (*tous) ont tous vu (*tous) ce film
the children have all seen this movie

Sportiche posits a VP-internal position for subjects to explain the fact that the quantifier *tous* 'all' in (7b) can appear between the auxiliary and main verbs, but not in other plausible positions (such as before the auxiliary verb or after the main verb). He suggests that the NP complement of the quantifier may raise independently to Spec,IP, leaving the quantifier stranded as in (8):

(8) $[_{IP}\,[_{NP}$ les enfants$]_i$ ont $[_{VP}\,[_{QP}$ tous $t_i\,]$ vu ce film]]

(7a) is derived by having the entire QP *tous les enfants* move from Spec,VP to Spec,IP. These facts, together with other considerations (e.g. adverb placement), provide evidence of a VP-internal position for the subject.

*C. In some languages the subject **never leaves** VP*

Irish (McCloskey 1991) presents evidence based on ellipsis. In English, VP-ellipsis leaves the subject behind:

(9) We didn't $[_{VP}$come home] last year, but we will $[_{VP}$_____] this year.

But in Irish, VP-ellipsis obligatorily deletes the subject too (showing that the subject is part of VP:

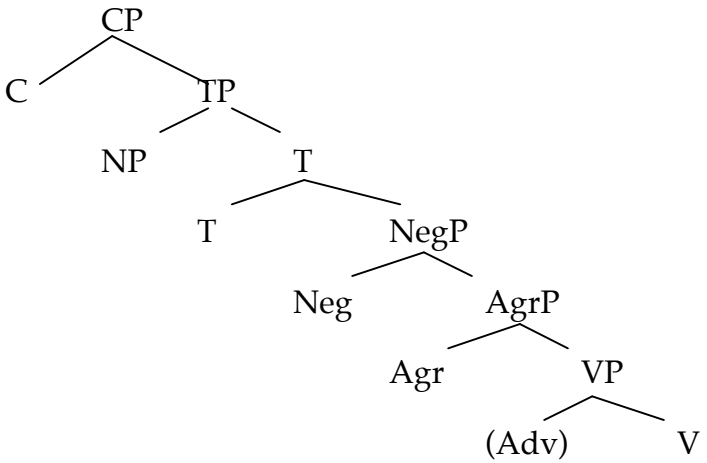
(10) Ní tháinig muid 'na bhaile anuraidh ach tiocfaidh $[_{VP}$____] i mbliana

NEG came we home last-year but come this year
'We didn't come home last year, but we will this year'

The Split-INFL hypothesis

One development — again based on typological differences — partly supports the VP-Internal Subject hypothesis and partly challenges it. The Split-INFL hypothesis — idea that IP is divided into several separate projections. Pollock 1989 —English and French have the following structure for negative clauses (Note that IP is split into TP, NegP, and AgrP):

(11)



For Pollock the surface subject position is in Spec,TP (in place of Spec,IP). The verb, under certain circumstances, may move from V through Agr to T. In French, as opposed to English, a tensed verb appears before the negation element in NegP (i.e. *pas* in French and *not* in English) and before an adverbial such as *souvent* or *often*. This is illustrated in (12), which contrasting with (13)

(12) a. Jean (n ') aime pas Marie.
b.*John likes not Mary.
c. Jean embrasse souvent Marie.
d.*John kisses often Mary.

(13) a.*Jean souvent embrasse Marie.
b. John often kisses Mary.

On Pollock's account, tensed lexical verbs in French (such as *aime* and *embrasse*) must move out of VP (where English requires the insertion of auxiliary verbs, e.g. *does not like*). In making a case for the separation of T and Agr, Pollock asserts that infinitival verbs in French are not required to move, and may thus optionally appear on either side of a VP adverb, as in (14):

(14) a. Souvent paraître triste pendant son voyage de noce, c'est rare.
often to.look sad during one 's honeymoon that.is rare
'To often look sad during one's honeymoon is rare'

b. Paraître souvent triste pendant son voyage de noce, c'est rare.
to.look often sad during one's honeymoon that.is rare
'To often look sad during one's honeymoon is rare'

In (14), the infinitive *paraître* appears alternately before or after the adverb *souvent*. In (14a), *paraître* is assumed to be VP-internal, while in (14b), it is claimed to have moved out of the VP. At the same time, he notes, these infinitives may not appear in front of the negation element *pas* (in contrast with tensed verbs, which can do so, cf. (12a) above). This is illustrated in (15):

(15) a. Ne pas regarder la télévision consolide l'esprit critique.
ne not to.watch the television strengthens one's independence

b.*Ne regarder pas la télévision consolide l'esprit critique.

Here, in (15), the infinitive *regarder* is only grammatical following *pas*, and not before it. On the basis of this, and much other evidence, Pollock argues for an intermediate landing site for the verb which is VP-external and subordinate to the head of TP. This position, between *pas* and the adverbial (e.g. *souvent*), is the target of 'short verb movement', and is formalized as the head of the agreement projection AgrP shown in (9).

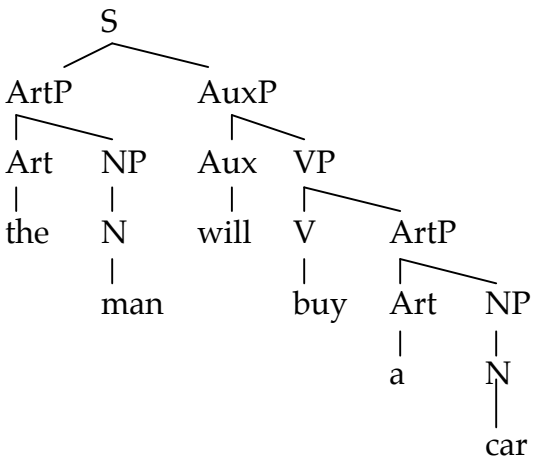
In Welsh (a typical VSO language), the subject occurs after the tensed element:

(16) a. naeth y dyn brynu car
did the man buy car
'the man did buy a car'

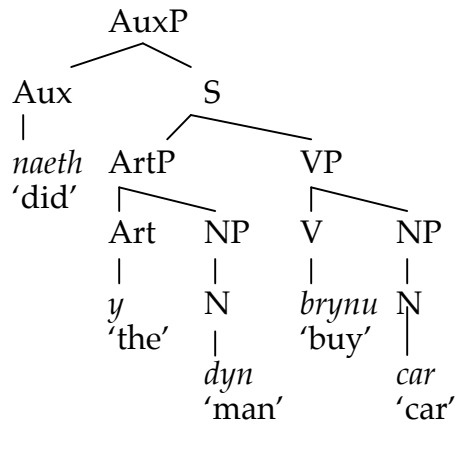
b. bryn-odd y dyn gar
buy-PAST the man car
'the man bought a car'

(17) Different structures of English and Welsh (Baker 2001: 131):

a. English



b. Welsh

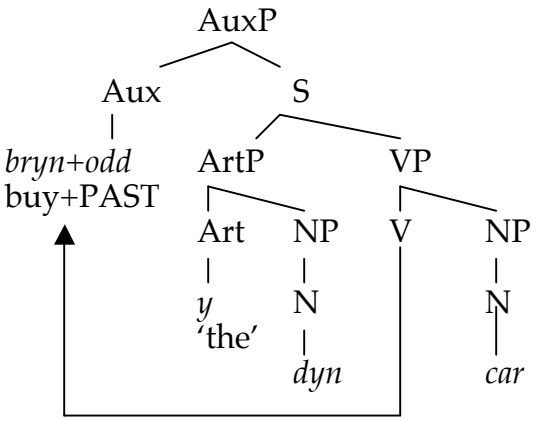


(18) The Subject Placement Parameter (Baker 2001: 130):
a. The subject of the clause is merged with the verb phrase. (Welsh)
b. The subject of the clause is merged with the auxiliary phrase. (English)

But we need another parameter for sentences with no free-standing AUX, as in (19b) (i. e. whether the verb moves or not):

(19) The Verb Attraction Parameter (Baker 2001: 132):
a. Tense auxiliaries attract the verb to their position. (Welsh)
b. Verbs attract tense auxiliaries to their position. (English)

(20) Creating VSO order in Welsh



NOTE: In this analysis the subject is *not* in VP. So 2 parameters: the SPP deals with the placement of the subject; the VAP with the displacement of the verb. These two parameters can be dissociated, as we will see.

Some distinctive typological traits shared by many (but not all) VSO languages (Carnie and Guilfoyle 2000b: 10):

A. Head initiality (Greenberg 1963)
B. Prepositional (Greenberg 1963)
C. Post-nominal adjectives (Greenberg 1963)
D. Preverbal tense, mood/aspect, question, and negative particles
E. Inflected prepositions (Kayne 1994)

(21) Irish: *ar* 'on'; *orm* 'on me'; *ort* 'on thee'; *air*, uirthi 'on him'; *orainn* 'on us'; *oraibh* 'on you'; *orthu* 'on them'

F. Left-conjunct agreement (Doron 2000). The verb agrees with the leftmost conjunct of a postverbal conjoined subject, rather than with the full conjoined subject:

(22) way-yiqqaḥ̊ šem waː-yɛpɛṯ ʔɛṯ-haṣ̊ṣ̊imlaː (Biblical Hebrew)
and-took**3SM** Shem and-Japheth ACC.the-garment
'and Shem and Japheth took a garment'

G. Lack of a verb 'have' (Freeze and Georgopoulos 2000):

(23) yaan huntulciimin ti? in-paapa (Yucatec)
COP.LOC one horse P my-father
'my father has a/one horse' (Lit. 'to my father is a horse')

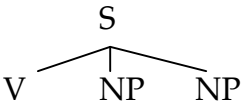
H. Copular constructions without verbs (Carnie 1995)

I. 'Verbal noun' infinitives (Myhill 1985)

no one parameter has been proposed that derives all of these

The first papers on VSO (and some recent ones) assume that VSO languages have a flat structure like (24) (Anderson 1984; Schwartz 1972; Awbery 1976; McCloskey 1979; McCloskey 1980; Stenson 1981; Tallerman 1990; Chung 1983):

(24)



Anderson and Chung 1977 is the first important paper to argue against flat structure. In a flat structure with one argument missing, VO and VS would have identical structures. But in Samoan and Tongan, rules such as Equi-NP-Deletion and Subject-to-Object Raising distinguish between VO and VS structures. Anderson and Chung argue as well that in Breton, V and O form a constituent at some level of derivation, but not V and S. Productive process of topicalization — V and O can be topicalized, but V and S cannot:

(25) Anderson and Chung 1977 on Breton (see also Sproat 1985 for Welsh)

a. [lenn eul levr brezhoneg] a ran bemdez
to-read a book Breton prt do-1sg every-day
'I read a Breton book every day'

b. *lenn Yannig a ra eul levr brezhoneg bemdez
to read Johnny prt does a book Breton every-day
'Johnny reads a Breton book every day'

This suggests that V and O form a constituent

McCloskey 1983 argues that in Irish participle-object sequences can be clefted, again arguing for a VP constituent:

McCloskey 1983 on Irish:

(26) [ag magadh orm] a bheadh an mhór-chuid acu
mock(PROG) on-me COMP would-be most-of them
'it's mocking me that most of them would be'

Also, there are subject-object asymmetries in VSO languages, again arguing against a flat structure (Speas 1990; Woolford 1991):

(27) fana n-e ia a ia ni neafi (Niuean; Seiter 1980)
shoot EMPH-ERG he ABS him REFL yesterday
'he shot himself yesterday'

If the subject were c-commanded by the object (as in a flat structure0 the sentence would violate principle B

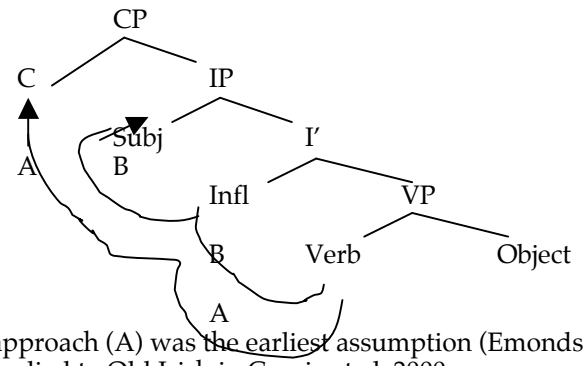
Emonds 1980 adds typological dimension to question — points out that typologically VSO like SVO — explained if underlyingly the same … and:

> That is, certain types of rules (especially non-structure-preserving movement rules [like SVO -> VSO]) make a language 'more complicated' and hence, rarer. An alternative taxonomic typology simply has no explanation for why one type of word order is more common, and the refusal to face this lack of explanation is of course a definitional diagnostic for dogmatism and/or empiricism. (Emonds 1980: 44)

There are two major classes of analysis that argue for SVO -> VSO (for extensive discussion see Carnie and Guilfoyle 2000b and the other papers in Carnie and Guilfoyle 2000a).

They are (A) 'The Weak-V2 approach' and (B) 'The Left-Edge of IP' approach:

(28)



The Weak-V2 approach (A) was the earliest assumption (Emonds 1980; Stowell 1989) and has been applied to Old Irish in Carnie et al. 2000.

But in most cases, the evidence is that the verb does not raise as high as C (McCloskey 1986; Massam 2000). So most researchers assume some version of The Left-Edge of IP approach (B). However, with the explosion of INFL Pollock 1989, the various possibilities of approach B are infinite in number

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Ouhalla 1991 exemplifies possibilities of approach B. In his comprehensive treatment of VSO languages, he argues that Celtic languages aren't 'fully' VSO

Ouhalla 1991 on properties of VSO languages (and how Celtic languages differ)

A. In 'real' VSO languages, AGR is inside TNS:

(29) a. ad-y-segh Moha ijn teddart (Berber)
fut (TNS)-ems(AGR)-buy Moha one house
'Moha will buy a house'

b. para ufan-maigu' (Chamorro; Chung 1983)
fut (TNS)-3p(AGR)-sleep
'they are going to sleep'

But in SVO languages and Celtic, TNS is inside AGR:

(30) a. les nouvelles arriv-er-ont dans trois jours
the news arrive-fut(TNS)-3p(AGR) in three days
'the news will arrive in three days'

b. canith Siôn (Welsh; Sadler 1988)
sing-fut(TNS)-3sg(AGR) John
'John will sing'

B. VSO languages have SVO as an alternative order (Greenberg's Universal #6). But the Celtic languages do not allow SVO as an alternative:

(31) Moha ad-y-segh ijn teddart (Berber)
Moha fut (TNS)-ems(AGR)-buy one house
'Moha will buy a house'

(32) *Mo mháthair chonaic mé (Irish; McCloskey 1983)
my mother saw me
'my mother saw me'

C. VSO languages lack non-inflected infinitives; SVO languages and Celtic languages tend to have them:

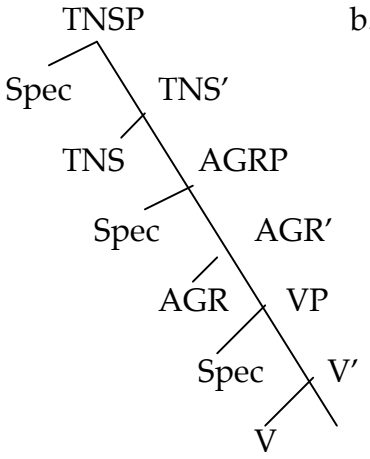
(33) y-arzu uxwwan [ad-*(y)-awer] (Berber)
ems-tried thief to-3ms (AGR)-escape
'the thief tried to escape'

(34) disgwyliodd Siôn [i Gwyn weld Mair] (Welsh; Harlow 1981)
expected-3s John for Gwyn see Mary
'John expected Gwyn to see Mary'

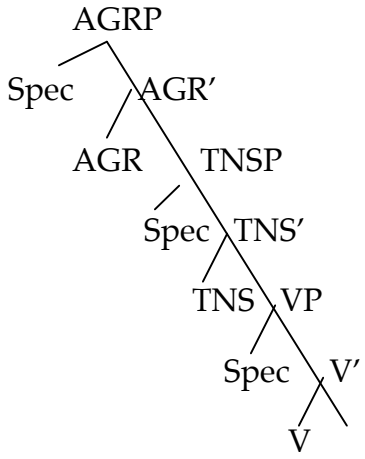
So for Ouhalla, the basic parameter is the ordering of TNS and AGR:

(35) The AGR/TNS parameter (Ouhalla 1991: 113)
a. TNS c-selects AGR (VSO languages)
b. AGR c-selects TNS (SVO languages)

(36) a.



b.



The major differences between VSO languages and SVO languages are claimed to follow from this difference in clausal architecture (given many (!) subsidiary assumptions). But why then are the Celtic languages seemingly SVO? Because they share with Arabic the following Case-assignment rule:

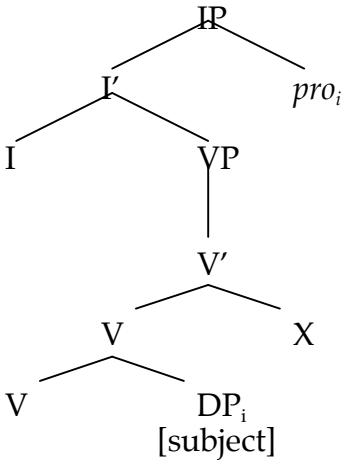
(37) Assign nominative Case to a noun phrase in Spec of VP

So the subject can stay behind in the VP. Something like this is behind the minimalist approach in Chomsky 1995; Marantz 1995, where everything in terms of feature strength

(38) Chomsky 1995; Marantz 1995 on VSO languages:
a. N-features of AGR and TNS are weak, so the subjects and objects remain in the VP
b. But the V-features are strong, so the V raises from the VP

An alternative to verb-raising is subject-lowering (see Choe 1987 for Berber; Chung 1990; Chung 1998 for Chamorro; Shlonsky 1987 for Arabic)

(39)



Chung 1998 on Chamorro

Her evidence is based on complex coordination facts and the fact that the subject can appear after any projection of V

(40) But aren't there strong arguments against such a lowering movement?
a. It is the adjunction of a maximal projection to a head (see Chomsky 1986)
b. It seems to violate the Proper Binding Condition, since the trace c-commands the antecedent (see Fiengo 1977 for an initial formulation)

(41) Chung says 'no problem':
a'. The adjunction constraint is too strong. For example, Rizzi and Roberts 1989 argue that in French a maximal projection can be adjoined to an intermediate projection.
b'. Lowering is possible if the trace is covered up by an expletive. Consider subject-final presentationals (Aissen 1975):

(42) There ran out of the bushes a grizzly bear.

Chung argues that something very similar is at work in Chamorro.

(43) Another possibility is that VSO derives from VOS:
a. England 1991 on the basis of the most common historical change in the Mayan languages

b. Chung (1996 presentation) for Maori

(44) The Verb Attraction Parameter (Baker 2001: 132):
a. Tense auxiliaries attract the verb to their position. (Welsh)
b. Verbs attract tense auxiliaries to their position. (English)

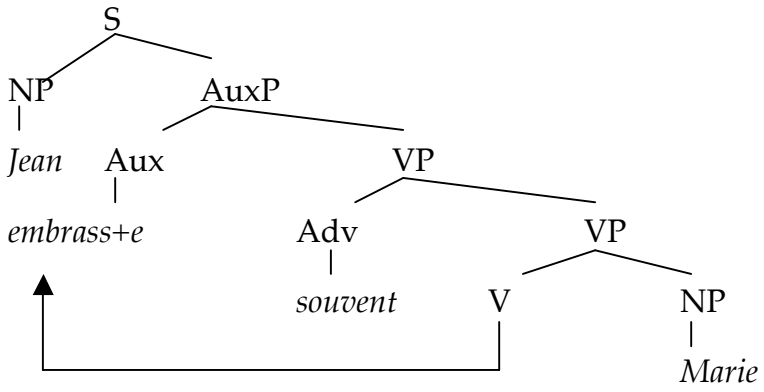
(45) The Subject Placement Parameter (Baker 2001: 130):
a. The subject of the clause is merged with the verb phrase. (Welsh)
b. The subject of the clause is merged with the auxiliary phrase. (English)

There are two parameters because their effects can be dissociated. There are languages 'half-way' between Welsh and English (i.e. like Welsh for Verb Attraction and English for Subject Placement)

In French, VP-adverbs, clausal negation, and floated quantifiers follow finite main verbs, in English they precede them:

(46) a. Jean embrasse souvent Marie.
b. *Jean souvent embrasse Marie.
(47) a. *John kisses often Mary.
b. John often kisses Mary.
(48) a. Jean (ne) mange pas de chocolat.
b. *Jean (ne) pas mange de chocolat.
(49) a. *John eats not chocolate.
b. John does not eat chocolate.
(50) a. Les enfants mangent tous le chocolat.
b. *Les enfants tous mangent le chocolat.
(51) a. *The children eat all chocolate.
b. The children all eat chocolate.

(52)



This is handled by feature-strength mechanisms in the MP. In French, the V-features of AGR or T or both must be strong (Marantz 1995); in English they must be weak.

Some ongoing controversies not discussed by Baker:
(53) The relation of TP and AGRP in French and English:

a. TP higher than AGRP (Pollock 1989)
b. AGRP higher than TNSP (Belletti 1990; Chomsky 1982a)

A. Do some languages lack some INFL-related projections?

(54) It is generally agreed that many languages lack the AGR projection:
a. Japanese lacks AGR (Fukui 1986; Fukui 1995) — there is no (overt) agreement and no motivation for positing an AGR node. But that means that Case cannot be assigned by AGR_S as in the (early) minimalist program
b Chinese lacks AGR (Aoun 1986). Aside from no overt agreement, that could help to explain why Chinese has expanded binding domains:

(55) $zhangsan_i$ shuo $_{S'}$[$ziji_i$ hui lai]
Zhangsan say self can come
'Zhangsan said that himself will come'

Thráinsson 1996 argues that some languages (Icelandic) have split-INFL, other languages (English) do not. The child assumes structure only when there is direct evidence for it.

B. Do the orderings of INFL-projections differ from language to language?

We have already seen one difference

(56) The AGR/TNS parameter (Ouhalla 1991: 113)
a. TNS c-selects AGR (VSO languages)
b. AGR c-selects TNS (SVO languages)

Other parametric differences proposed by Ouhalla:
(57) a. NEG is inside TNS and AGR (Turkish, English)
b. NEG is outside (at least) AGR (Arabic, Berber)

C. Does the Split-INFL hypothesis threaten the VP-internal Subject Hypothesis?

The problem is that, if INFL is split, what seemed like an argument for a subject occuplying VP might just be an argument for the subject being in a 'lower' INFL projection

For example, consider 'Transitive Expletive Constructions' (Bobaljik and Jonas 1996; Sigurðsson 1991; Vikner 1991) (NOTE: θ = Icelandic thorn)

(58) a. θað grefur kona gröf í garðinum (Icelandic)
there digs a-woman a-grave in garden-the

b. θað hefur einhver borðað epli
there has someone eaten an-apple

It looks like there is an expletive-argument chain between the expletive and the NP in VP-internal subject position.
But Bobaljik and Jonas 1996 argue that the lower subject is actually outside of VP, in a lower 'INFL'-type projection.

McCloskey 1996 and Bobaljik and Carnie 1996 even argue that the subject in Irish is higher than VP (in the overt syntax)

> The proliferation of categories within the inflectional layer has made it difficult to point to cases where one can say with any confidence that the subject remains within VP. (McCloskey 1997: 219)

D. Do all languages have obligatory subjects?

Most languages do not requite overt subjects (Gilligan 1987), yet for most one can construct arguments that a null element occupies subject position.

(59) The Extended Projection Principle (EPP)
a. Chomsky 1982b: The Projection Principle + the requirement that all clauses must have subjects
b. Chomsky 1995: 198-199: The EPP (D-) feature of T is always strong, universally forcing the raising of the subject

(60) But recent work suggests that EPP-properties can be parameterized (Alexiadou and Anagnostopoulou 1999)
a. Languages with [Spec,IP] satisfy the EPP in the ordinary way.
b. Other languages satisfy it by means of verb movement to I.
There is a strong connection between language of the (60b) type and verb-initiality, null subjects, etc.

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