2

Semantic alignment systems: what's what, and what's not

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2.1 Introduction

This chapter has a single aim that is both modest and overly ambitious. I wish to address two (related) questions: what, in terms of participant-coding strategies, should be considered in a discussion of 'semantic alignment', and what we can say about languages with 'semantic alignment' languages in terms of the two related, but distinct, dimensions of morphology and syntax.

Semantic alignment is, as stated in the introduction to this volume, the phenomenon whereby basic alignment properties of a language can best be described by appealing to semantic factors, rather than syntactic ones (typically syntactic factors involving argument structure, a simplification of semantics). This has been the claim, whether overt or otherwise, since Boas and Deloria (1941) described the grammar of Dakota (Lakota); the kinds of factor that can contribute to these morphosyntactically coded distinctions in semantics are well described in Merlan (1985) and Mithun (1991). If we wish to claim that semantic alignment is a linguistic type, and not simply an epiphenomenal feature that emerges in some languages as the result of the 'direct' coding of semantic roles in the morphosyntax of a language, we need to carefully examine both parts of the term: 'semantic' and 'alignment'. In this chapter I address the issue of what 'counts' for alignment purposes. This is not completely straightforward, since many of the tests that are normally employed in evaluating alignment are syntactic in nature, and we are explicitly interested in investigating alignment where syntax is not a direct factor in determining alignment.

I shall not in the main be making any controversial claims, but simply following the logical implications of a number of accepted assumptions about linguistic structure. Apart from examining splits in the encoding of the S or a monovalent clause—something that is essential (though not sufficient) to the consideration of semantic alignment in a language—I shall also examine bivalent clauses to find parallel instances of semantic information appearing in otherwise syntactically aligned coding strategies (see Beavers 2006 for a recent synthesis of these

kinds of alternations, which include the well-described conative alternations of English).

2.1.1 *Splits in alignment*

In the occasional rare language, all morphological and syntactic (constructional?) tests show the same grouping of eligible and ineligible, privileged and non-privileged arguments. While this is an ideal, one that is often propagated in undergraduate introductory classes, it is not the usual case for all languages, or even across the whole of one language. English, a well-known and very strongly and consistently nominative-accusative language, shows numerous instances of the S and A being treated similarly, and differently to the P; in (1)–(3) some of the most obvious and non-controversial of these are presented, being the data basic to a determination of alignment: case marking on NPs, agreement on the verb, and the position of the NPs with respect to each other and the verb. In all three cases the S patterns with the A, differently to the P, and so the language can be described as showing nominative-accusative alignment.[1]

Alignment in English: nominative-accusative patterns

(1)	pronominal case	A	**I** saw **them.**
		S	**I** walked.
		P	**They** saw **me**.
(2)	verbal agreement	A	She sees them.
		S	She walk**s.**
		P	They see her.
(3)	position with respect to the verb	A	**I** saw them.
		S	**I** walked.
		P	They saw **me**.

Even English, however, presents conflicting evidence: there is some data on minor construction types that does not show the near-universal nominative-accusative pattern in pivot choice. In (4) we can see that the preposition choice for the post-head appearance of arguments in nominalizations depends on an ergative/absolutive split, with As being marked by *by*, and Ss and Ps marked by *of*. In (5) the restrictions of prenominal past participle modification are shown. As are ineligible to appear in the construction, while Ps are eligible (*the eaten glutton* could be construed grammatically, but only if *the glutton* is the argument eaten, not the argument which carries out the eating). Examining the behaviour of Ss reveals a split along semantic grounds: an agentive S may not appear in this construction, while more patientive Ss do participate. Finally the phenomenon of Right-node raising, illustrated in (6), inevitably allows for gapping of a non-nominative entity, due to the preverbal position of any As and Ss in English.

[1] I use A, S, and P, following Comrie (1978), to refer to the arguments of monovalent and bivalent verbs.

(4)	Preposition choice when the head precedes in a nominalized clause	A *the investigation **by** the police* S *the arrival **of** the guests* P *the consumption **of** alcohol*
(5)	Eligibility for a nominal to be modified by a prenominal past participle verb	A **the eaten glutton* Sa **the sung choir* Sp *the **fallen** leaves* P *the **beaten** protesters*
(6)	Ellipsis in gapping constructions	A **__ washed the plates and **I** dried the* dishes. S **__ ran and **I** fell over.* P *I washed __ and you dried **the dishes**.*

Do the syntactic facts in (4)–(6) 'count' for the purposes of determining the alignment of the language? Given that linguists have discussed syntactic, as opposed to morphological, 'ergativity', we need to develop a theory of what 'counts', and what doesn't, when evaluating pivots and alignment.[2] Given the data in (4)–(6), can English be said to have ergative dependent marking, or 'stative-active' syntax? Why not? The answer lies in an examination of the ways in which we determine alignment, and an examination of the factors that separate semantic alignment from the more familiar syntactic alignment patterns such as ergative-absolutive and nominative-accusative.

2.1.2 *Discerning alignment*

There are a number of ways to define alignment in the grammar of a language, or in any sub-part of that grammar (see Siewierska 2003 for discussion of some of the complications arising when determining alignment). Foley (1993) shows that even in a single language, verbs may show different alignment in different parts of their paradigms, for the coding of the same arguments, and Siewierska (2003) follows this with a detailed study of a range of languages with complications in this area. Similarly, in different constructions we might find different patterns of alignment. In addition to verbal agreement, however, we also find case (or adposition) marking frequently used as an indicator or alignment, and, more rarely, the position of the arguments in the clause.

Equally importantly, and well-acknowledged in the literature, is the fact that morphological behaviour does not necessarily correlate with syntactic behaviour (see e.g. Chung 1978, Simpson 1991). In Table 2.1 I list a number of different 'tests' for morphological alignment, and a number of the more commonly applied tests used in determining the grammatical status of the arguments of a clause as subject, object, etc. I shall illustrate, and discuss, these different constructions below.

[2] Such a theory is not wholly undeveloped; the work of Falk (2000, 2006) in particular addresses the question of evaluating different tests for 'subjecthood', and determining which component of grammar hosts them, and thus what they really test.

TABLE 2.1. Ways in which a difference between syntactic roles can be realized

'Morphological'	Syntactic
Agreement	
Presence/form	Adjunct clauses
Position	Relative clauses
Location	Conjoined clauses
Case/adposition	
Presence/form	Floating quantifiers
Position	Imperatives
Location	Valency-changing
Position	
Pre/postverbal	Secondary predication
Pre/post-oblique	… etc.

I shall introduce a cover term for the use of head-marking (agreement), dependent-marking (case or adposition use), and position (order of elements in the clause) when used to determine alignment: these are *primary morphosyntactic coding devices*. Their primacy is established by the fact that these three devices are used to some extent in all clause types. Examples of 'morphological' alignment determined by these different mechanisms are not hard to assemble. In (7)–(9) the zero (or optional) category is shown in brackets; thus in Russian there is agreement that marks the A or the S of the clause; P is not indicated on the verb. In Kabardian, on the other hand, all of A, S, and P are cross-referenced on the verb, with the S using the same set of prefixes as the P. Much has been written about the markedness relations that hold between different case or agreement patterns; all generalizations appear to be statistical, not universal. Thus, for instance, while an overt ergative case is overwhelmingly common in languages with ergative-absolutive alignment marked on the dependants of the clause, there are counterexamples in which absolutive is marked and ergative is unmarked (two such examples are Nias (Donohue and Brown 1999) and Tlapanec (Wichmann 2005b)).

Head marking

(7) Russian: A+S vs (P) agreement, showing nominative-accusative alignment;
Enga: A+S vs P agreement; Bunak: (A+S) vs P agreement;
Kabardian: A vs S+P agreement, showing ergative-absolutive alignment;
Burmese: (A) vs S+P agreement;
Acehnese: A+Sa vs (P+Sp) agreement, showing semantic alignment;
(numerous): A+Sa vs P+Sp agreement (see this volume).

TABLE 2.2. Alignment determined by different morphosyntactic coding devices

	Nom-Acc	Erg-Abs	Semantic
Agreement	Swahili	Tz'utujil	Acehnese
Case	Yindjibarndi	Jiwarli	Tsova-Tush
Position	Thai	Paumarí	Ambonese Malay

Dependent marking

(8) Yindjibarndi: (A+S) vs P case marking, showing nominative-accusative alignment;
Japanese: A+S vs P case marking; **Oirata** or **Oromo**: A + S vs (P) case marking;
Jiwarli: A vs (S+P) case marking, showing ergative-absolutive alignment;
Nias or Tlapanec: (A) vs S+P case marking;
Tsova-Tush: A+Sa vs P+Sp case marking, showing semantic alignment.

Word order is less frequently cited as a determiner of alignment, but it is also relevant. The examples in (9) show simple

Word order

(9) Thai: AVP/SV order of NPs and V, showing nominative-accusative alignment;
Paumarí: AVP/VS order of NPs and V, showing ergative-absolutive alignment (also Tepehua, and PVA/SV for Mangarrayi);
Ambonese Malay: AVP/SaV & VSp order of NPs and V, showing semantic alignment.

The information in (7)–(9) is summarized in Table 2.2. Here, unsurprisingly, we see that any of the morphosyntactic strategies may be used to mark any of the main alignment types.

Both nominative-accusative and ergative-absolutive alignments share the fact that they are syntactically determined: specifically, the determination of an ergative or accusative alignment depends on examining all, and only, A, S and P. In other words, the semantic differences between different kinds of Ss is neutralized in these languages.[3] The label 'syntactic alignment', when used in opposition to 'semantic alignment', is intended to represent the fact that the morphosyntactic groupings are based on syntactic (specifically, argument structure) positions.

[3] To a less important degree the semantic differences between different As and Ps are also neutralized when determining syntactic alignment systems, since by definition an A and a P represent a basic, idealized notion. As we shall see in sections 2.6 and 2.7, even languages with predominantly syntactic alignment show degrees of semantic 'interference' in their morphosyntactic choices.

When we examine syntactic, rather than morphological, alignment, examples of grammatical constructions having 'pivots' that are more syntactically privileged than non-pivots are similarly easy to find in the literature. Some examples are shown below.

2.1.2.1 *Adjunct clauses* In English a [(*While/After/Before*) V-*ing* . . .] clause is restricted to having an ellipsed S or A which must be coreferential with the S or A of the main clause. In (10) we can see that the ellipsed argument of the adjunct clause is an A, while in (11) it is an S. (12) is an attempt to construct an adjunct clause with an ellipsed P that is coreferent to an argument in the main clause, and it is not grammatical.

(10) *She*$_i$ *tickled her niece*$_j$ [*while* $Ø_{i,*j}$ *preparing her summary*].

(11) *She*$_i$ *tickled her niece*$_j$ [*while* $Ø_{i,*j}$ *relaxing*].

(12) **She*$_i$ *tickled her niece*$_j$ [*while she was amusing* $Ø_{i,j}$].

Other languages show different restrictions on coreference into adjunct clauses, but the point is that this is a syntactic construction that can have restrictions which can be interpreted as syntactic pivots.

2.1.2.2 *Relative clauses* In Dyirbal (Dixon 1972), a [. . . V-*ngu* . . .] clause, which can roughly be described as marking non-complement subordination (including functions similar to relativization), is restricted to having an ellipsed S or P. This restriction can be illustrated with the textual examples shown as (13)–(15).[4] The example in (13) shows a *-ngu* clause headed by an S, *kuku*. In (14) the verb *wukal* 'give' is affixed with the valency-decreasing *-ngay* to function as an antipassive, leaving the agent of the verb as the S of a monovalent predicate, and so eligible to head a *-ngu* clause. Finally in (15) we can see that a relative clauses headed by *wandal* 'hang up (TR)' allows the P to head the relative clause. (Examples from Dixon 1972: 386, 388, 371.)

Dyirbal

(13) *bura-n kinyanbayji kuku* [*nyina-ngu*],
see-NFUT DEM-II-DOWN.HILL-SHORT.WAY owl sit-REL
[*mulku-mba-ngu*].
noise-INTR.VRBLZR-REL
'I saw a mopoke owl sitting down there [in the grass] making a noise.'

(14) *ngali, kajin-du baka balakarranya*, [*kulu wuka-l-nga-ngu*].
1DU stick-INSTR dig two-ACC NEG give-ANTIPASS-REL
'We'll dig with a yamstick around our two brothers [in the tree], who wouldn't give [us any big starlings].'

[4] Dyirbal examples have been retranscribed in a version of a general Australianist orthography. The velar stop is shown as <k>, to avoid confusion between sequences of /n/+/g/ and the velar nasal /ŋ/, shown as <ng> (voicing is not contrastive in Dyirbal).

(15) *yaludayimban* *bura-n* [*kayu-ngka*]
HERE-ALL-UP.HILL-SHORT.WAY-TR.VBLZR-NFUT look-NFUT cradle-LOC
bayi nyalngka [*wanda-ngu*] *bubi-n* *bangkukarra-ku.*
I: ABS child hang.up-REL take.off-NFUT two.people-ERG
Looking up, [they] saw a baby hanging there in a cradle; the two of them took [the baby and cradle] down.'
(literally, 'a baby that (someone) had hung up there in a cradle')

Examples of S,A restrictions in relative clauses are easy to find in many other languages, and will not be illustrated here (see Keenan and Comrie 1977 and much subsequent work).

2.1.2.3 *Conjoined clauses* If there are restrictions on gapping across coordinated clause boundaries, it seems to be universal that the pivot is, or at least allows, S or A gapping.[5] English is one language that follows this restriction, as shown in (16).

(16) *She*$_i$ *tickled her niece*$_j$ *and then* $\emptyset_{i,*j}$ *prepared her summary.*

Even languages with predominantly ergative morphology can show a preference for S,A pivots in coordinate structures. Citing Dyirbal again, we can note the following example (Dixon 1972: 73), showing that the A of the first clause is coreference with the A of the second clause (most cases of coordinate gapping in texts follow this pattern).

(17) a. *Ngaja bala yuku yuba-n,*
1SG:ERG III:ABS stick put.down-NFUT
'I put down the stick, . . .
b. *balan jukumbil jilwa-n.*
II:ABS woman kick-NFUT
[and] kicked the woman.'

Other languages may monitor the conditions on coreference across the clause boundary, as in the Skou (Skou family, north-central New Guinea) examples in (18) and (19). In (18) the A of the first clause is coreferential with the S of the second clause, and the instrumental *=pa* is used at the end of the first clause to signal this relationship. In (19), in which the A and the S are not coreferential, the obviative is used. Importantly, the distinction monitored is whether the S or A in each of the clauses is the same or different vis-à-vis the S or A in the following clause.

[5] Claims about S,P privileges in languages such as Dyirbal do not stand up to an examination of textual, rather than elicited, material, where instances of pivots involving a P almost exclusively involve resultative clauses. (17) is one exam1e that defies characterization as being a clause in a language with an S,P pivot for coordination.

Skou

(18) *Pe te=angku=ing a pe=r-ú=**pa** pe=moe te*
3SG.F 3PL=child=the 3SG.F=3SG.F-hear=INSTR 3SG.F=return 3SG.F:go
pá.
house
'She heard the children and then (she) went home.'

(19) *Pe te=angku=ing a pe=r-ú=**ko** te=me te pá.*
3SG.F 3PL=child=the 3SG.F=3SG.F-hear=OBV 3PL=PL.return 3PL:go house
'She heard the children and then they went home.'

2.1.2.4 *Floating quantifiers* The reference of a V-adjoined quantifier in Japanese is restricted to the S or P of the clause (Donohue 2004a). (20) shows that an S may be the referent of a V-adjoined floating quantifier, while (21) shows that, given a clause with an A and a P, an A cannot be interpreted as modified by a floating quantifier, while a P can.

Japanese

(20) *Gakusei ga niwa de **san-nin** asob-ta.*
student NOM garden INSTR three-CLF play-PAST
'Three students played in the garden.'

(21) *Gakusei ga kodomo o niwa de **san-nin** mi-ta.*
student NOM child ACC garden INSTR three-CLF see-PAST
'The students saw three children in the garden.'
* 'Three students saw the children in the garden.'

Floating quantifiers with different restrictions can be found in English (in which the restriction is to an S,A argument) and many other languages (see Sportiche 1988, Shlonsky 1991, Aoun and Li 1993, Kuno et al. 1999).

2.1.2.5 *Imperatives* The addressee of an imperative in **English** can be any S or A. In (22) and (23) we see examples of and S and an A being omitted when coreferential with the addressee of an imperative construction. (24) shows that a P may not be so omitted.

(22) __ *Go to the shops!*

(23) __ *Finish your homework!*

(24) **Daddy tickle __!*

Most language have an [agent] restriction as well, or instead, but English is surprisingly free in terms of causative construal. The requirement on agentivity in many languages makes this construction sound a lot like a semantically restricted construction; but now and then, as in English, we find clear evidence that the construction has been syntacticized. In (25) the S of a verb that is clearly lexically

specified as non-agentive is gapped in the imperative construction, and in (26) the non-agentive S of a passive construction is gapped. Such imperatives are not possible in languages with a more semantically determined imperative construction, such as Tukang Besi (Donohue 1999a).

(25) *When you get the cue, __ fall over in a heap!*

(26) *__ Be seen at Saturday's big opening spectacular!*

2.1.2.6 *Secondary predication* Secondary predication is often restricted to core arguments, or a particular set of core arguments. Typically, resultatives are restricted to predicating Ps, while depictives can have a wider scope. In (27) the secondary predicate *senseless* is predicated off the P of *knock*, not of the A, such that the only interpretation possible for the sentence is that *the idiot*, not *she*, becomes senseless as a result of the event in the main clause.

(27) *She knocked the idiot senseless.*

2.1.3 *Splits in subject coding that are not semantic alignment*

In many cases a language can exhibit a split in the behaviour of its subjects without us wanting to consider this to be an instance of semantic alignment. The lexical semantics of particular verbs is often the characteristic that allows them, or disallows them, to appear in particular constructions. In English we have already seen that prenominal modification by a past participle verb is only grammatical if the verb is non-agentive (see (5) and the discussion preceding it). This is a clear indication of the lexical semantics of the verb affecting the grammaticality of a construction; but it does not play a role in alignment, since the word order, case marking, and (lack of) agreement do not monitor this semantically regular split.

In Tukang Besi (Donohue 1996a, 1999a), only agentive verbs may occur with the accompaniment applicative *-ngkene*, as can be seen in (28) and (29). In (28) the accompaniers are marked as obliques in PPs headed by *kene*, and both agentive and non-agentive predicates are possible. In (29) the accompaniers are introduced as the objects of complex predicates composed of a verb and the accompaniment applicative (which is almost certainly related to the preposition *kene* historically, but which has a distinct set of synchronic restrictions). In (29) we see that the clause with an agentive base verb, *tinti*, is grammatical, but one with a non-agentive base verb such as *buti* is not.

Tukang Besi

(28) a. *No-tinti kene iai=su.*
3REAL-run with younger.sibling=1SG.GEN
'He ran with my little sister.'

b. *No-buti kene iai=su.*
3REAL-fall with younger.sibling=1SG.GEN
'He fell with my little sister.'

(29) a. *No-tinti-ngkene te iai=su.*
3REAL-run-ACCOM CORE younger.sibling=1SG.GEN
'He ran with my little sister.'

b. **No-buti-ngkene te iai=su.*
3REAL-fall-ACCOM CORE younger.sibling=1SG.GEN
'He fell with my little sister.'

Agreement on the verb is identical in the sentences in (28) and (29), as is word order and case marking. We must conclude that, while the lexical semantics of the verbs certainly do intrude into the grammar of the language, they do not intrude into the alignment system of the language. On the other hand, the fact that only experiential verbs allow for the genitive encoding of their subjects is evidence that there is a dative-marking pattern in Tukang Besi (see Nichols, this volume), albeit a minority pattern.

Tukang Besi

(30) a. *No-tinti.*
3REAL-run
'He ran.'

b. *No-buti.*
3REAL-run
'He fell.'

c. *No-mo'aro.*
3REAL-hungry
'He's hungry.'

(31) a. **Tinti=no.*
run=3GEN
'He ran.'

b. **buti=no.*
run=3GEN
'He fell.'

c. *Mo'aro=no.*
hungry=3GEN
'He's hungry.'

By this restriction to the definition of semantic *alignment*, with the emphasis being on the aligning of the arguments of the verb in terms of head-marking, dependent-marking, or the relative order of these elements, we exclude the 'classical' unergative/unaccusative splits that are found in many western European languages, such as Dutch, in which auxiliary choice is the only overt marker of class membership.

Dutch

(32) a. *Ik heb haar gezien.*
1SG.NOM have 3SG.F.ACC see.PTCPL
'I saw her.'

b. *Ik heb daar gesprongen.*
1SG.NOM have there jump.PTCPL
'I jumped there.'

c. *Ik ben daar naar toe gegaan.*
1SG.NOM be there to to go.PTCPL
'I went there.'

Splits in alignment which do not involve conditioning by the lexical semantics of the predicate are also outside the purview of the label 'semantic alignment'. As an example of this, consider the following data from Chamorro (Austronesian, Guam; Topping 1973, Gibson 1992, Chung 1998, and Chung 2003 for discussion of the absolutive enclitics). Here, prefixal agreement in realis clauses is found only for ergative arguments, while in irrealis clauses both ergative and nominative arguments trigger agreement. Since all verbs participate in this alternation, the split in marking of any given S is not dependent on the lexical semantics of the verb, but on the independently imposed TAM category of the clause. (Examples of languages in which, for example, verbs that are inherently specified as being stative are marked differently to those that are inherently eventive would be treated as instances of semantic alignment. The crucial difference is that it is lexical aspect that governs the split.)

Chamorro

(33) a. *Un-tugi' i kätta.*
2SG-write 1 letter
'You wrote the letter.'

b. *Pära un-tugi' i kätta.*
will 2SG-write 1 letter
'You will write the letter.'

(34) a. *H<um>anao-kao pära si Rita.*
go<SI>-2SG.ABS to SI Rita
'You went to Rita.'

b. *Un-hanao pära si Rita.*
2SG-go to SI Rita
'You will go to Rita.'

Semantic alignment, then, should be seen as a subset of all kinds of split in the marking of Ss, rather than simply being a replacement label for the same phenomenon.

Another thing that is not here considered to be an instance of semantic alignment is the contrast in the morphosyntactic encoding of arguments of predicates of different syntactic categories. This is most commonly found in the contrast between subjects of (monovalent) verbal predicates and the 'subjects' of nonverbal predicates. This topic is pursued at length in Danielsen and Granadillo (this volume), but a few examples of languages which show differences along this parameter are given below. In Tukang Besi the elements of a clause follow the verb; postverbal objects and adjuncts have been seen in (28) and (29), and (35) shows a postverbal subject. In a nonverbal clause, however, the subject precedes the predicate, (36) (subjects are shown in bold in (35) and (36)). There is clearly a split, based on the syntactic category of the predicate, in terms of where the subject of the clause appears. Since the split depends on the syntactic category of the predicate, we cannot consider it to be an instance of semantic alignment.

Tukang Besi

(35) *No-tinti* ***na iai=su.***
3REAL-run NOM younger.sibling=1SG.GEN
'My younger sister ran.'

(36) ***Te*** ***ia*** *te* *iai=su.*
CORE 3SG CORE younger.sibling=1SG.GEN
'She's my younger sister.'

Many languages which allow nonverbal clauses to appear without copular verbs show an epiphenomenal distinction between predicates: verbal predicates may take (verbal) agreement morphology, while nonverbal clauses may not. While this does distinguish two types of clause, each of which consists only of a subject and a predicate, it does so on the basis of the the morphological possibilities that are available to one syntactic category (verbs can take agreement) and which are not, in this language, available to other syntactic categories (nouns and adjectives do not take agreement). We can see this in many languages, and it is illustrated here with data from Skou. Examples of monovalent and bivalent verbal clauses have already been seen in (18) and (19); importantly, we noted that the S of A of a clause shows agreement by means of nominative prefixes (and clitics), while the P does not. In (37) we can see a simple (monovalent) verbal clause, in which the person and number features of the S are multiply indexed on the verb. In (38) the predicate is not verbal, but nominal, and there is no agreement. In other words, unlike the S of (37), which aligns with the A for the purposes of agreement coding, the 'S' of (38) shows the same (lack of) marking on the verb that characterises a P. This might be thought of as being an instance of a split in the coding of the S, but the fact that we are examining different clause types, split along syntactic category lines, means that we cannot consider this to be an instance of semantic alignment. Further, rather than being interpreted as a difference in the morphosyntax of verbal and nonverbal clauses, this should be interpreted as one of the defining contrasts that can be found between verbs and nouns.

Skou

(37) *Pe=ueme=ing a* *pe=ta<w>ùng.*
3SG.F=woman=the 3SG.F=sit<3SG.GF>
'The woman sat down.'

(38) *Pe=ueme=ing a* *kurù.*
3SG.F=woman=the teacher
'The woman is a teacher.'

In One (Torricelli, northern New Guinea) we can see a difference between verbal and nonverbal clauses in terms of case marking. The case *sa* is optional in both verbal and nonverbal clauses, and marks a contrastive topic when it appears, as in (39) and (40). In negated clauses *sa* remains optional in verbal clauses, but is obligatory in nonverbal clauses, as shown in (41) and (42). In addition to the polarity distinctions, there is a difference in grammaticality based on the syntactic category of the predicate.

One

(39) *Wo* (*sa*) *y-aplere.*
3SG TOP 2/3SG-run
'She ran.'

(40) *Wo* (*sa*) *i ama.*
3SG TOP 1SG mother
'She's my mother.'

(41) *Wo* (*sa*) *fe y-aplere foon.*
3SG TOP NEG 2/3SG-run NEG
'She didn't run.'

(42) *Wo* *(*sa*) *fe i ama foon.*
3SG 'TOP' NEG 1SG mother NEG
'She's not my mother.'

This section has presented a number of ways in which there can be a split in the marking of arguments that does not correspond to what we are calling evidence of semantic alignment: the split can be based on the behaviour of the verbs with respect to affixation, reflecting the lexical semantics of the predicate, but not reflecting any agreement or case, or word order differences. The split might be based on factors that are external to the verb, such as TAM values for the clause, in which case this is again not semantic alignment. Finally, and perhaps most straightforwardly, when the split makes reference to syntactic categories, such as word class, then we do not consider the split to be an instance of semantic alignment.

2.2 Semantic alignment: morphological and ordered

Examples of semantic alignment systems are not hard to find, though their reporting has largely concentrated on America and isolated pockets of Eurasia (see Mithun, this volume, and Nichols, this volume). Notable exceptions to this trend in reporting can be seen in Donohue (2004b) and Foley (2005), Tsukida (this volume), and the well-documented case of Acehnese (Durie 1985, 1988, Foley 2005, Klamer, this volume).

For Acehnese, an Austronesian language from far western Indonesia, Durie (1988) reports that there are no reasons to group Sa and Sp together in terms of their behaviour in discourse. Morphologically, we can distinguish these two monovalent arguments in terms of their agreement: and Sa will always show agreement by proclitic, while with an Sp agreement is optional, and by enclitic (Durie 1985: 181); the semantic factor that distinguishes Sa from Sp is volitionality.[6]

Acehnese

(43) *Jih ka=**ji***=jak.
he INCHOATIVE=3=go
'He has gone.'

(44) *Gopnyan ka=saket=**geuh***.
he INCHOATIVE=sick=3
'He is sick.'

[6] It is likely that the alignment system in Acehnese was diffused from the Austro-Asiatic languages of the area (see e.g. Semelai (Kruspe 2004)), which probably (given their distribution in peninsular Malaysia and the Nicobar islands, as well as the unusual, and very Austro-Asiatic-like, phonologies of the Sumatran Austronesian languages, and the considerable number of non-Austronesian toponyms in the area) represent a pre-Austronesian substrate across Sumatra.

To provide some further examples from the southwest Pacific, we can see that in these languages semantic alignment can be coded through agreement, through case marking, or through NP position in the clause, just as can the more common syntactic alignments. In (45)–(47) we see that in Galela verbal prefixes split along semantic grounds (Shelden 1991; see Holton, this volume, for more discussion of the North Halmahera group of languages to which Galela belongs), with *wo-* marking an agentive argument, whether it is the A of a bivalent clause or the S of a monovalent clause. *Mi-*, indexing a 3rd person feminine argument, indicates non-agentivity, regardless of whether that non-agentivity is assigned to an S or a P.

Galela

(45) ***Wo-mi****-sasano.*
3SG.M.A-3SG.F.P-ask
'(Aweng) questioned her.'

(46) ***Wo****-mau ....*
3SG.M.A-want
'He wants (to go).'

(47) ***Mi****-sirangu.*
3SG.F.P-nose.runs
'She has a runny nose.'

In Waris (Brown 1988), from New Guinea, the case marking found on As is also used for agentive Ss. The case marker that marks recipients of verbs of transfer is also used for some Ps, if they are animate or relatively unaffected inanimate Ps. It is also used for human affected Ss (see Nichols, this volume, for discussion of this type of pattern).

Waris

(48) *Ka-****va*** *ye-****m*** *hévakomandha-v.*
1-TOP 2-DAT KILL-PRES
'I kill you.'
(*—m* only appears on animate or less-affected inanimate Ps)

(49) *Ka-****va*** *mongla-na pró-na.*
1-TOP foot-GEN come-PAST
'I came by foot.'

(50) *He-****m*** *daha-v.*
3-DAT die-PRES
'He is dying.'

Ambonese Malay, an eastern variety of Malay spoken in Maluku province, Indonesia, shows a split based on agentivity and coded by the position of the NP relative to the verb: in bivalent clauses AVP order is found, and in monovalent clauses an agentive S precedes the verb, while a non-agentive S follows (these ideals are frequently complicated by arguments appearing in sentence-initial position when topical).

Ambonese Malay

(51) *Dorang cari betang konco.*
3PL search.for my friend
'They're looking for my friend.'

(52) ***Betang konco*** *su-bajaang.*
my friend PERF-walk
'My friend walked away.'

(53) *Su-jato* ***betang konco.***
PERF-fall my friend
'My friend has fallen over.'

In Palu'e (Austronesian, southern Indonesia) we find a variant of the Ambonese Malay system seen in (9) and (51)–(53). Monovalent clauses always allow an SV order, as in (54); bivalent clauses shown an AVP order. In addition to the subject-initial order, non-agentive predicates also allow their S to follow the verb, as in (56); this is not possible for agentive predicates (see Donohue 2005a for arguments concerning clause structure which imply that we should not treat (54b) as an instance of topicalization). The Sa is always coded preverbally, in the same position as an A, while the Sp may appear postverbally, mimicking a P, or preverbally.

Palu'e

(54) a. *Ia phana-'u.*
3SG go-PERF
'She's gone.'

b. *Ia molu-'u.*
3SG fall-PERF
'She's fallen over.'

(55) *Kami phote nio.*
1PL.EX pick.coconut coconut
'We picked some coconuts.'

(56) a. **Phana ia-'u.*
go 3SG-PERF
'She's gone.'

b. *Molu ia -'u.*
fall 3SG-PERF
'She's fallen over.'

The languages presented in this section have all shown semantic alignment in one way or another, via agreement, via case marking, or via ordering in different positions with respect to the verb. In the following section we shall examine ways in which alignment might be split and yet not be considered to be an instance of semantic alignment.

2.3 Morphological splits in marked alignment

We have seen that different subsystems of the grammar can take different alignment, in terms of the morphology used. The appearance of such splits is not uniformly distributed, however: examining languages with splits, we find that

while morphological splits are common for grammatical systems with overtly ergative components in their grammar, splits involving an S,A component tend to be restricted to agreement being realized with a nominative grouping, and not having dependent-marked nominative categories.

There are no reported cases of word order varying to show a split (though see eg. Payne 1994a), but variation in word order correlating with degrees of transitivity is a common enough phenomenon. In Puare, a Macro-Skou language from north-central New Guinea, SOV is the dominant clausal order, but there are systematic differences between preverbal and postverbal objects: the postverbal position is only used with indefinite or nonspecific objects, while the preverbal position is unrestricted. This can be seen in (57). A bare NP object may appear either preverbally or postverbally, with a corresponding difference in interpretation. When the object is modified with a demonstrative, and thus is overtly specified as being definite, the postverbal coding option is ungrammatical.[7]

Puare

(57) a. *N-aeɭe n-uaɭa ɭku.*
1SG-go 1SG-search.for egg
'I went to look for eggs.'

b. *N-aeɭe ɭku n-uaɭa.*
1SG-go egg 1SG-search.for
'I went to look for the egg.'

c. **N-aeɭe n-uaɭa ɭku pende.*
1SG-go 1SG-search.for egg that

d. *N-aeɭe* ɭku pende n-uaɭa.
1SG-go egg that 1SG-search.for
'I went to look for that egg.'

A frequently noted characteristic of alignments other than the simple (at least, statistically more frequent) nominative-accusative one is the presence of a split in the morphosyntax of the language, such that one part of the language shows one alignment, while another area of morphology or syntax has a different pattern. Much has been written about the areas of morphosyntax in which these splits can occur, and the motivations for these splits. Here I shall present some examples of alignment splits in general, and of those involving semantic alignment in particular.

2.3.1 *Head vs. dependent*

In Warlpiri (Pama-Nyungan, Australia) the morphology on the head of the clause, the auxiliary, shown a nominative-accusative alignment, while dependents are

[7] Objects which are inherently specific, such as pronouns, are similarly restricted to preverbal position.

TABLE 2.3. Main/subordinate splits in alignment in Mamean languages

Language	A	S	P
Ixil			
Main	ERG	ABS	ABS
Dependent	ERG	ERG	ABS
Aguacatec			
Main	ERG	ABS	ABS
Dependent$_1$	ERG	ERG	ABS
Dependent$_2$	ERG	ERG	ERG
Mam			
Main	ERG	ABS	ABS
Dependent	ERG	ERG	ERG

all marked on an ergative-absolutive basis. We can see that the presence of the ergative *-rlu* on *ngarrkajarra* in the bivalent clause shown in (58) does not affect the ability of the nominative enclitic *-pala* to appear on the auxiliary showing agreement for this argument, just as is found with *ngarrkajarra* in the monovalent clause seen in (59).

Warlpiri

(58) *Ngarrka-jarra-**rlu** ka-**pala**-jana wawirri-patu nya-nyi.*
Man-DU-ERG PRES-3DU.NOM-3PL.ACC kangaroo-PL see-NONPAST
'The two men see the several kangaroos.'

(59) *Ngarrka-jarra ka-**pala** parnka-mi.*
man-DU PRES-3DU.NOM run-NONPAST
'The two men are running.'

The syntax of Warlpiri depends on the S,A vs. P opposition much more than it does on the case-marked S,P vs. A distinction. In addition to the verbal agreement data seen above, data from controlled clauses indicates that the syntactic pivots in this language ignore the ergative case marking (see 2.4.1).

2.3.2 *Main versus subordinate*

Mam (Mayan, Guatemala; England 1983) has an ergative-absolutive system of agreement in main clauses, and a neutral system in subordinate clauses. Other related languages use the agreement morphemes in a nominative-accusative pattern in subordinate clauses (England 1983: 262). Table 2.3 shows the functions of verbal agreement markers in main and dependent clauses in three languages. In all three the main clause shows an uncomplicated ergative-absolutive alignment. In Ixil, dependent clauses show a nominative-accusative alignment, with

the 'ergative' prefixes being used to cross-reference both Ss and As. In Mam the 'ergative' prefixes are used for any core arguments, regardless of their syntactic role, thus instantiating a neutral alignment pattern. Aguacatec has two different types of dependent clause (determined by alignment on the verb), one which patterns like Ixil dependent clause, and one which patterns like Mam dependent clauses.

Examples from Mam illustrating this split can be seen in (60)–(63). In (60) we can see the absolutive and ergative agreement prefixes for a bivalent clause. In (61) the main clause is monovalent, and the S of that clause is indicated with absolutive agreement. The subordinate clause is also monovalent but, by contrast, shows agreement by use of the same ergative prefix that was seen in (60) cross-referencing the A.

Mam

(60) *Ma* ***ch****-ok* *t-b'iyo-7n* *Cheep kab' xiinaq.*
REC **3PL.ABS**-DIR **3SG.ERG**-HIT-DIRECTION.SUFFIX José two man
'José hit two men.'

(61) *N—****chi*** *ooq'* [*t-poon* *ky-txuu7*].
PROG-**3PL.ABS** cry **3SG.ERG**-arrive 3PL-mother
'They were crying when their mother arrived.'

In (62) the relative clause contains a passive verb, and the single argument of that verb is indexed with the ergative prefixes. (63) shows the use of two sets of ergative prefixes when there are two arguments in the dependent clause, making it clear that there is complete neutralization in terms of head-marking morphology.

(62) *O* *tzaalaj* *xjaal* *t-i7j* *t-paa* [*aj*
PAST 3SG.ABS:be.happy person 3SG-about 3SG-bag when
t-kan-eet *priim-x*].
3SG.ERG-find-**PASS** early-ENCL
'The person was happy about his bag when it was found early.'

(63) *Ok* ***qo*** *tzaalaj-al* [*ok* *t-****q****-il* *u7j* *t-e*
POT 1PL.ABS be.happy-POT when **3SG.ERG-1PL.ERG**-see book 3SG-POSS
yool *t-e* *I7tzal*].
word 3SG-POSS Ixtahuacán
'We will be happy when we see the Ixtahuacán dictionary.'

2.3.3 *TAM-dependent*

Sindhi (Indo-European, Pakistan and India) (together with many other languages of the area) shows an ergative case-marking pattern only in perfective or past clauses. In (64) we see that the subject of the unrealized clause takes the regular nominative form, while in (65) the subject appears in the oblique form, which is available only for As (amongst the core arguments).

TABLE 2.4. Case distinctions in Wik-Mungkan

	A	S	P
1SG	*ngay*	*ngay*	*ngay**ang***
2SG	*nint*	*nint*	*nint**ang***
3SG	*nil*	*nil*	*nun**ang***
Common noun ('dog')	*ku'**ang***	*ku'*	*ku'*

Sindhi

(64) ***Maa*** *maani* *khaaiDu-le vaTha tho.*
1SG.NOM chappati eat.INF-for buy FUT.M
'I am going to buy the chappati to eat.'

(65) ***Moo*** *maani* *khaiDu-le* *vartee.*
1SG.OBL chappati eat.INF-for buy.PERF.F
'I bought the chappati to eat.'

Numerous other examples of this split can be found in the Indo-Aryan languages of northern India and Pakistan.

2.3.4 *Person-dependent*

Since Silverstein (1976), many authors have commented on the tendency for more highly animate arguments to show a nominative-accusative alignment, while ergative alignment is associated with less animate arguments. This can be manifested in many ways: the appearance of (nominative-accusative) case marking only on (highly animate) pronouns in English, compared to the unmarked NPs elsewhere. Table 2.4 shows the case marking for core arguments found in Wik-Mungkan (Pama-Nyungan, northeast Australia) on singular pronouns, and on a representative common noun. While the pronouns show a nominative-accusative distinction, the nouns are inflected with an ergative-absolutive alignment (using the same case suffix, *-ang*, in each case; similar patterns are reported for Kala Lagaw Ya in Comrie 1981). This pattern of having a split in case marking according to animacy is common across a wide selection of Pama-Nyungan languages of Australia.

The animacy hierarchy is also realized, indirectly, in the tendential appearance of ergative marking on lower-animate or pragmatically focused subjects in many languages of the New Guinea highlands (Donohue and Donohue 1997, Donohue 2005b).

2.3.5 *Person- (and tense-)dependent*

Iha (West Bomberai (non-Austronesian), Indonesia; Donohue and Brown 1999) shows a split in case marking on local pronouns. In past tenses the local singular

TABLE 2.5. Case distinctions in Iha past tenses[a]

	A	Sa	Sp	P
1SG	*on*	*on*	*on/ni*	*ni*
2SG	*ko*	*ko*	*ko/ki*	*ki*
3SG	*mi*	*mi*	*mi*	*ndo*
1PL.EX: *mbi*, 1PL.IN: *in*, 2PL: *ki*, 3PL: *mi* (invariant)				
Common nouns	*kabágat*	*kabágat*	*kabágat*	*kabágat*

[a] Bold line indicates boundary of optionality.

pronouns, shown in Table 2.5, can be used in a way that is compatible with a semantic alignment analysis. The basic divisions are shown in Table 2.5; note that common nouns, illustrated here with *kabágat* 'tree kangaroo', as well as the plural pronouns, are invariant in form. Of the singular pronouns, the 3rd person has an accusative form distinct from the nominative. The local persons have a distinct accusative, and this accusative may be used for non-agentive Ss in non-future tenses. Unlike the use of the accusative to mark a P, the use of the accusative for an Sp is always optional.

In (66)–(69) we can see that the choice of *mi* vs. *ndo* for 3rd person singular pronominals is not random but reflects a nominative-accusative alignment (*mi* is also used for 3rd person plural reference, in which situation there are no case distinctions).

Iha: 3rd person A and P coding

(66) ***Mi*** *kalípan mŋgbréhe-bidya.*
3 mat weave.mat-PRES.3
'He/She is weaving a mat.'

(67) * ***Ndo*** *kalípan mŋgbréhe-bidya.*
3SG.P mat weave.mat-PRES.3
'He/She is weaving a mat.'

(68) *Kpyémbot on* ***ndo*** *kpáke-bon.*
yesterday 1SG 3SG.P fight-PAST.1SG
'I fought her/him yesterday.'

(69) *Kpyémbot on* ***mi*** *kpáke-bon.*
yesterday 1SG 3(PL only; *3SG) fight-PAST.1SG
'I fought them/(*her/him) yesterday.'

When we examine monovalent verbs in detail, we see an interesting pattern. With agentive verbs the nominative set of pronouns must be used, as expected. With non-agentive verbs either the nominative or the accusative pronouns may be used,

when the subject is 1st or 2nd person. Third person subjects may only use the nominative pronouns.

Agentive verb, past

(70) *Kebér* ***on*** *on-ma kpéh néŋgak ha-wahá-ŋge.*
just.then 1SG 1SG-POSS village towards climb-go-IRR
'I wanted to go back up to my village just then.'

(71) * *Kebér* ***ni*** *onma kpéh néŋgak hawaháŋge.*

Non-agentive verb, past

(72) *Kpyémbot* ***on*** *mŋgbahúrmbon.*
yesterday 1SG fall-PAST.1SG
'Yesterday I fell over.'

(73) *Kpyémbot* ***ni*** *mŋgbahúrmbon.*
yesterday 1SG.P fall-PAST.1SG
'Yesterday I fell over.'

(74) *Kpyémbot* ***mi*** *mŋgbahúr-mbih.*
yesterday 3 fall-PAST.3
'Yesterday s/he fell over.'

(75) **Kpyémbot* ***ndo*** *mŋgbahúr-mbih.*
yesterday 3SG.P fall-PAST.3
'Yesterday s/he fell over.'

When a non-agentive verb is used in a non-past tense, then the pronoun choice is once again fixed, with all persons being coded by the nominative pronouns.

Non-agentive verb, non-past

(76) ***On*** *mŋgbahúrnten.*
1SG fall-FUT.1SG
'I'm going to fall over.'

(77) * ***Ni*** *mŋgbahúrnten.*
1SG.P fall-FUT.1SG
'I'm going to fall over.'

This section has shown us some of the ways in which morphology can be less than straightforward. In the following section I shall elaborate on some of the syntactic ways in which alignment can be determined.

2.4 Constructions, pivots, and alignment

Often a language that has an ergative morphological system will show a different alignment in terms of syntax (the opposite, morphological accusativity and syntactic ergativity, is also, but rarely, attested).

Commonly attested dimensions of morphology/syntax splits include:

- Coordination almost always (universally?) selects an S,A pivot as the unmarked case.[8]
- Constructions that are close to the verb syntactically or semantically (such as suppletive verb stems, resultatives, or in some cases floating quantifiers) tend to have an S,P pivot.

Other preferential pivots can be established for various constructions, and will not be enumerated here. I shall illustrate, or at least mention, some of the more common splits that can be found.

2.4.1 *Ergative morphology, nominative pivots*

This is perhaps the most common of alignment splits. We have already seen an example of this in Warlpiri, which has ergative case, but in which intraclausal syntax consistently marks S,A as being distinct from P. When we examine the syntax of the language, it becomes clear that the S,A grouping is the one that is relevant for syntactic purposes. In (78) we can see that the subordinate verb uses the suffix *-karra* to indicate coreference of the A of the subordinate clause with the S of the main clause; the person whistling is coreferent with the person trimming the boomerang. (79) shows that the same suffix is used when the main clause contains an A that is coreferential with the A of the subordinate clause, and (80) shows that when the main clause is monovalent the same *-karra* suffix is used. If the S or A of the subordinate clause is coreferent with the P of the main clause, a different suffix, *-kurra* (identical to the allative suffix), must be used, as shown in (81). Finally, when the S or A of the subordinate clause is not related to any of the arguments of the main clause, the suffix *-rlarni* is used. This clearly establishes a contrast between the grouping of S and A on the one hand and P on the other.

Warlpiri

(78) *Ngarrka ka wirnpirli-mi karli jarnti-rninja-karra.*
man AUX whistle-NPST boomerang trim-INF-PROX
'The man is whistling, while trimming the boomerang.'

(79) *Ngarrka-ngku ka purlapa yunpa-rni karli*
man-ERG AUX corroboree sing-NPST boomerang
jarnti-rninja-karra-rlu.
trim-INF-PROX-ERG
'The man is singing a corroboree, while trimming the boomerang.'

[8] Claims have been made about S,P-pivot coordination in various languages. Closer examination of textual materials reveals that there is, at best, a lack of any particular preference, rather than a preference for, or a restriction to, a pivot that targets a non-S,A category.

(80) *Kurdu-ngku ka-rla ngapa-ku wapal-pangi-rni wangka-nja-karra-rlu.*
child-ERG AUX-RLA water-DAT search-dig-NPST speak-INF-PROX-ERG
'The child is digging for water, while speaking.'

(81) *Ngarrka-ngku marlu pantu-rnu, marna nga-rninja-kurra.*
man-ERG kangaroo spear-PST grass eat-INF-OBV:OBJ
'The man speared the kangaroo while it was eating grass.'

(82) *Ngarrka-ngku ka karli jarnti-rni, kurdu-ku maliki*
man-ERG AUX boomerang trim-NPST child-DAT dog
wajili-pi-nja-rlarni.
chase-VERB-INF-OBV
'The man is trimming a boomerang while the child is chasing the dog.'

These data were drawn from Hale (1982), where there is a more detailed discussion of the issues raised here. Further analysis can be found in Simpson (1991).

2.4.2 *Accusative morphology, absolute pivots*

This split is rarely attested, but can be found. Oirata, from southeastern Indonesia (de Josselin de Jong 1937, Donohue and Brown 1999), shows nominative-accusative morphological alignment, as determined by the case choices on pronouns. Similarly, Oirata shows a semantic alignment in the switch-reference system (with some tendency towards event reference—see the discussion of Central Pomo below). By contrast, relativization is restricted to the S or P argument.

The basic morphosyntax can be seen in (83)–(86). Verbs show no agreement, but nominative is a marked category on pronouns.

Oirata

(83) *In-**te** ee asi.*
1pl.excl-nom 2SG.POLITE see
'We saw you.'

(84) *Ee-**te** in asi-ho.*
2SG.POLITE-NOM 1PL.EXCL see-NEG
'You didn't see us.'

(85) *An-**te** ete na'a ipa.*
1sg-nom roof obl fall
'I fell off the roof.'

(86) *In-**te** Ahum na'a ma'u.*
1pl.excl-nom Ambon obl come
'We arrived from Ambon.'

The switch-reference morphology also monitors S,A in the first clause being coreferential or not to an (A+Sa) vs (Sp+P) in the second clause. In (87) we see that the coreference of the A of the first clause with the S of the second means that the same-reference suffix *-le* is used. In (88), by contrast, it is the P of the first clause that is coreferent with the ellipsed S of the second clause. Since there is no identity of S or A with S or A, the different-reference suffix *-le* must be used.

Note that (88), which features the agentive verb *tipare* 'run' in the second clause, cannot be interpreted as showing the A of the first clause coreferent with the S of the second clause at a different point in time; this becomes relevant with the discussion of (90).

(87) *In-**te*** *ihar asi-**le*** __ *lalare.*
1PL.EXCL-NOM dog see-SAME walk
'We$_i$ saw a dog and then Ø$_i$ walked (away).'

(88) *In-**te*** *ihar asi-**to*** __ *tipare.*
1PL.EXCL-NOM dog see-DIFFERENT flee
'We$_i$ saw a dog$_j$ and then Ø$_j$ ran off.'
* 'We$_i$ saw a dog$_j$ and then later Ø$_i$ ran away.'

In (89) the second clause contains a non-agentive verb, *ipa* 'fall', the subject of which is coreferent with the subject of the first clause; just as in (87), the non-final verb takes the same reference suffix *-le*. In (90) the (monovalent) verbs of the two clauses are identical to those seen in (89), and the different reference suffix, seen earlier in (88), is used to link the clauses. The difference between (89) and (90) is that the second clause in (90) must be interpreted as occurring at a different point in time, as an event unconnected to the climbing seen in the first clause. As seen in (88), this use of different reference markers to indicate a different temporal reference, rather than a different argument reference, is not possible when the verb of the second clause is agentive but only when it is non-agentive. We can see, then, that the syntax monitors the difference between Sa and Sp in the switch-reference system, in that an Sp may optionally be treated in the same way as a P for the purposes of selecting switch-reference marking. (91) shows a more 'canonical' use of the different reference suffix with bivalent clauses, with an interpretation that clearly indicates two separate events.

(89) *In-**te*** *ete ia'a iamoi-**le*** __ *ipa.*
1PL.EXCL-NOM roof on climb-SAME fall
'We$_i$ climbed onto the roof and straightaway Ø fell off.'

(90) *In-**te*** *ete ia'a iamoi-**to*** __ *ipa.*
1PL.EXCL-NOM roof on climb-DIFFERENT fall
'We$_i$ climbed up onto the roof and (after a while) (when we were up there) fell off.'

(91) *Ira eme modo ina-**to*** *tutu.*
water take child give-DIFFERENT drink
'Give the child some water to drink.'

Relative clauses are formed with the suffix *-n* on the verb, and optionally mark the non-head core argument in the possessive case, if pronominal (1SG.POSS: *an*).

In (92) and (93) we can see examples of a relative clause headed by a P or an S, respectively.

(92) [$_{NP}$ *Ihar* [*an-**te*** *asi-**n***]] *tipare.*
dog 1SG-NOM see-REL flee
'The dog that I saw left.'

(93) *In-**te*** [$_{NP}$ *ihar* [*mara-**n***]] *asi.*
1PL.EXCL-NOM dog go-REL see
'We saw the dog that had left.'

In (94) and (96) we can see that a relative clause headed by an A is not possible; instead, strategies such as that seen in (95) and (97), employing switch-reference morphology, must be used. Note that the fact that switch-reference morphology must be used with subordinated, as well as coordinated, clauses means that the relative clause translation of (97) is not as unusual as it might seem at first glance.

(94) * *An-**te*** [$_{NP}$ *modo* [*ira* *tutu-**n***]] *asi.*
1SG-NOM child water drink-REL see
'I saw the child that had drunk the water.'

(95) *An-**te*** *modo asi-to* *ira* *tutu.*
1SG-NOM child see-DIFFERENT water drink
'I saw the child and he/she drank the water.'
'I saw the child drinking the water.'
'I saw the child who was drinking the water.'

(96) * [*Ihar* [(*ani* / *an*) *asi-**n***]] *mara.*
dog 1SG.ACC 1sg.poss see-REL go
'The dog that saw me left.'

(97) *Ihar* *ani* *asi-**le*** *mara.*
dog 1SG: ACC see-SAME go
'The dog$_i$ saw me$_j$ and Ø$_i$ left.'
(or, to give a discoursally equally valid translation or two: 'Seeing me, the dog left.', or equally, 'The dog that saw me left.')

2.4.3 *Semantically based coordination pivot?*

McLendon (1978) describes the case marking and switch reference of Eastern Pomo as having a system of switch reference that shows semantic alignment. The difference in case marking for agentive and non-agentive participants can be seen in (98)–(100). Note particularly that the Sa of (98) is coded differently to the Sp of (99).

Eastern Pomo

(98) ***Há·*** *mí·pal* š·a·k'a.
1SG.A 3sg.m.p killed
'I killed him.'

(99) ***Há·*** *wá-du.kìya.*
1SG.A going
'I'm going.'

(100) ***Wí*** c'e· *xélka.*
1SG.P slipping
'I'm slipping.'

The switch reference system can be shown by the suffixes on the verbs of the first verb in each of (101)–(103). Here we can see that when the agentive argument of the first clause is coreferential with the agentive argument of the second clause, the same-reference suffix *-y* is used on the verb. By contrast, *-qan* is used in other instances, including those such as (103) in which the identity of the two S arguments is the same, but one is agentive and one is not.

(101) *Há· káluhu-**y**, si·má· mérqaki·hi.*
1SG.A went.home-SAME went.to.bed
'I went home and then went to bed.'

(102) *Há· káluhu-**qan**, mí·p' mérqaki·hi.*
1SG.A went.home-DIFFERENT 3SG.M.A went.to.bed
'I went home and then he went to bed.'

(103) *Há· xá· qákki-**qan**, wi q'a·lál ·ta·la.*
1SG.A take.bath-DIFFERENT 1SG.P got.sick
'I took a bath and then I got sick.'

This behaviour is *not* found in Central Pomo, which shows event-reference tracking, not (strictly) participant-reference tracking (Mithun 1993); the same analysis might well extend to Eastern Pomo, if it was examined in more detail. Lani, and probably a number of other languages of the Western Highlands of New Guinea, show evidence of switch-reference systems that are similar to that of Central Pomo, though while Central Pomo seems to favour SAME marking, this being the default and the DIFFERENT marking being used only when a list of possible SAME-qualifying factors are not met, the languages in New Guinea favour DIFFERENT marking.[9] Skou, mentioned earlier (examples (17) and (18)), also shows a mixture of participant-tracking and event-tracking in its switch-reference system; it is no

[9] The fact that in New Guinea the more eastern languages with switch reference tend more closely to monitor participant reference, and that these languages also show the greatest elaboration of switch-reference systems, means that we have an interesting cline in terms of the function of the switch-reference system, as well as its morphological exposition.

TABLE 2.6. Morphology and syntax

	NOM/ACC syntax	non-NOM/ACC syntax
NOM/ACC morphology	Very common	Extremely uncommon
non-NOM/ACC morphology	Relatively common	Very uncommon

accident that Skou is located approximately midway between the eastern and western extremities of switch-reference systems in New Guinea.

2.5 Morphology, syntax, and semantic alignment phenomena

It should be clear from the preceding section that the fact that a language is morphologically aligned one way or another does not entail any categorial implications about overall alignment. This observation is not a new one; Li and Lang (1979), Van Valin (1981), and many authors since have reached the same conclusions. There are some strong tendencies, however, which are charted in Table 2.6.

At the same time, we must consider the fact that the label 'non-NOM/ACC' covers both the relatively common case of languages with 'ergative-absolutive' alignment and languages with semantic alignment. What are the criteria that lie behind semantic alignment? Since the term 'semantic alignment' is a new one (see Wichmann, this volume, for discussion of the rationale for the term), it is worth briefly examining the kinds of terminology that have been used, by different authors and in different frameworks, to describe the kinds of argument encoding we are considering here. Note that a number of the terms commonly used to describe the oppositions match descriptors employed by, for instance, Hopper and Thompson (1980), in describing the degrees of (semantic) transitivity in a clause, without restricting the sense to the argument of monovalent verbs. Table 2.7 presents the kinds of term that have been used, by different authors and from different traditions, on the left, with the 10 criteria discussed by Hopper and Thompson listed on the right. While not all of the columns on the left match categories on the right, the number of matches is too high to be random.

The fact that Hopper and Thompson assembled their list of criteria with the aim of unifying the description of monovalent and bivalent clauses is telling, and calls for the examination of bivalent clauses as well as the monovalent ones that we have been seeing so far, when discussing semantic alignment. This examination can be found in the following two sections.

2.5.1 *Bunak*

The unity of many of these different parameters can be seen in Bunak, a non-Austronesian language of central Timor spoken in southern Indonesia and

TABLE 2.7. Alternative terminologies/parameters of variation

Labelled	opposition	(cf. Hopper and Thompson 1980)
active	stative	Participants
Proto-Agent	Proto-Patient	Kinesis
eventive	stative	**Aspect**
unergative	unaccusative	Punctuality
controlled	non-controlled/uncontrolled	**Volitionality**
Sa	Sp	Affirmation
Initial-1	Initial-2	Mode
agentive	non-agentive	**Agency**
unaffected	**affected**	Affectedness of O
external argument	internal argument	Individuation of O . . .)
Actor	**Undergoer**	

western Timor Lorosa'e. Verbs show agreement with an accusative prefix, and this prefix marks person and, for 3rd persons, a distinction that has traditionally been described as one of gender, differentiating animate and inanimate. Examples of sentences that show this difference are given in (104) and (105).

Bunak: 'animate' vs. 'inanimate' based on human vs. non-human

(104) *en tapol himo **g**-ukat.*
person fall DET.AN 3AN-lift
'(they) picked up the one who had fallen.'

(105) *Neto r-on **h**-ukat loi ni'.*
1SG REFL-arm 3INAN-lift good NEG
'I can't lift my arm.'

The same morphological distinction is also used to show the difference between specific (= 'animate') and nonspecific objects (note that the inanimate prefix *h-* is not realized before a consonant-initial verb stem).

'Animate' vs. 'inanimate' based on specific vs. nonspecific

(106) *Neto uwor g-ial gie.*
1SG vegetables 3AN-carry IRR
'I'm going to carry the vegetables.'

(107) *Gereje g-ewen no eto uwor wit loi.*
church 3-front OBL 2SG vegetables (3INAN-)buy good
'In front of the church, you can buy vegetables.'

The same contrast is also used to show the kinds of difference that we saw with English prepositionally marked objects. The use of the 'animate' agreement set on

the verb implies a more agentive A, while the 'inanimate' set of prefixes has no such implication.

'Animate' vs. 'inanimate' based on agentive vs. non-agentive

(108) *Neto musik ga-mak.*
1SG music *3AN-hear*
'I listen to music.'

(109) *Neto musik mak.*
1SG music (3INAN-)hear
'I heard music.'

'Animate' vs. 'inanimate' based on realis vs. irrealis

(110) *Neto meja g-ukat heta.*
1SG table 3AN-lift able
'I am able to lift the table.'

(111) *Neto meja h-ukat heta.*
1SG table 3INAN-lift able
'I will be able to lift the table.'

There is also a very small number of monovalent verbs which take the accusative prefixes to show agreement with their single arguments. On their own, it would appear that these predicates represent a (recent?) grammaticalization from transimpersonal verbs (see Malchukov, this volume, Mithun, this volume, and sections 2.7 and 2.8 below); but in light of the widespread semantic alignment found in related languages (see e.g. Klamer, this volume, for a survey, and Kolana in section 2.6.5 of this chapter), it is perhaps more likely that the accusative monovalent verbs of Bunak represent a retention of an earlier alignment system.

2.5.2 *Basque*

Basque is a language that has been considered, by various authors, to show ergative alignment, or else to show semantic alignment (Joppen and Wunderlich 1995, Hualde and Ortiz de Urbina 2003, C. Donohue 2005). Rather than examine this debate in detail, I refer the reader to Aldai (this volume), who examines the historical and geographic distribution of alignment in Basque varieties. The data that have been used to argue for a split in intransitive codings are showin in (112) and (113). While (112) shows absolutive case and agreement (on the auxiliary) for the S, (113) shows ergative morphology (and the use of the 'have' auxiliary, rather than the 'be' auxiliary).

Basque

(112) *Mikel joan da.*
Mikel.ABS go.PERF BE+TNS
du.
HAVE+TNS
'Mikel has went.'

(113) *Kepa-k tarda-tu*
Kepa-ERG be.late-PERF
'Kepa was late.'

Problems with an analysis that tries to differentiate these ergative and absolutive monovalent verbs in terms of semantic or syntactic features involve the fact that

both agentivity and patientivity are associated with both the ergative and the absolutive case-frame verbs.[10]

In addition to showing different argument codings in monovalent clauses, there is also a variety of case frames available to bivalent predicates. The common ergative-absolutive pattern is shown in (114), while (115) and (116) show ergative-dative and dative-absolutive predicates.

(113) *Soldadu-ek haur guzti-ak hil zituzten.*
Soldier-PL.ERG child whole-PL.ABS kill.PERF HAVE+TNS:3PL.ERF>3PL.ABS
'The soldiers killed all the children.'

(114) *Pablo-k Miren-i itxaroten* dio.
Pablo-ERG Miren-DAT wait.for HAVE+TNS:3SG.DAT
'Pablo is waiting for Maria.'

(115) *Sagarr-ak gusta-tzen zaizkit.*
apple-PL.ABS like-IMPERF BE+TNS:1SG.DAT>3PL.ABS
'I like apples.'

Clearly any complete study of semantic alignment in Basque must also take into account the fact that the bivalent clauses, even more than the monovalent ones, display more than one case-marking option. While there is evidence for a system of semantic alignment in Basque, there is even stronger evidence for the dominance of semantic over syntactic marking when we examine bivalent clauses. The presence of more than one bivalent coding option is not unusual, and only the fact that there are three different choices in Basque, as well as there being more than one monovalent option, merits the inclusion of the language here.

2.6 Three-way splits and beyond

So far I have examined alignment with a two-way split: nominative-accusative, ergative-absolutive, agentive-non-agentive, etc. It is also possible for the basic alignment of a language to allow for a three-way split. The obvious way to have a three-way split is to have three (or more) different ways of marking (lexically distinct) Ss. This type of complex coding probably precludes simple order-with-respect-to-verb, such as seen in Ambonese Malay earlier, by virtue of there only being two positions with respect to the verb, preverbal and postverbal.[11] Three-way splits tend to occur in head-marking languages, and tend to show splits in terms of some other alignment, either syntactic or semantic, though this is not an absolute characterization.

[10] C. Donohue (2005) argues that internal causation is the semantic factor which differentiates the two classes.

[11] It is possible to imagine a language with obligatory incorporation of some Ss, allowing for a three-way split. I am not aware of any such language.

We can see a three-way split in S coding in Warekena (Brazil, Maipuran: Aikhenvald 1998: 229–30), a language without much head-marking morphology. Here, not only is preverbal and postverbal position utilized to show the difference between A and Sa (preverbal) and P and Sp (postverbal) but some preverbal Ss are additionally coded in a PP, as in (120).[12]

Warekena: bivalent clause: AVP

(117) *wa-ha wafi yuʧia-hã ema*
then-PAUSAL jaguar kill-PAUSAL tapir
'Then the jaguar killed the tapir.'

Monovalent clauses: V S

(118) *ʃupe-hẽ ʃiani-pe*
many-PAUSAL child-PL
'Children are many.'

(119) S V

peya nu-ɻitua wiyua
one 1SG-brother die
'One of my brothers dies.'

(120) [PP S] V

nu-yue mawali
1SG-for hungry
'I am hungry.'

In the following sections I shall examine the ways in which head or dependent marking can be used to split monovalent predicates into three categories, and the ways in which this use of semantic features to an extreme degree also affects the ways in which the arguments of bivalent predicates are encoded in the clause.

2.6.1 *Three morphological markers*

Languages of the Muskogean family (e.g. Choctaw, Chickasaw, Mikasuki, Koasati, Alabama; USA, southeast), and of the Yapen branch of the West Papuan family (Indonesia, Jones 1986, Donohue 2001, 2004b; distantly related to the North Halmahera languages discussed earlier, and in Holton, this volume) show a three-way distinction in the coding of Ss, but also have more than one way to mark an A or a P.[13] The possibilities are shown in outline in Table 2.8.

Muskogean languages (here exemplified with data from Koasati (Kimball 1991)) have optional nominative case marking for S or A; Yapen languages have optional (to different degrees) ergative marking for A. Muskogean languages show a switch-reference system that monitors (according to majority opinion) identity of S, A. In both Muskogean and Yapen languages, however, the verb shows a complex range of coding options. Basic clauses for Saweru, a Yapen language, are shown in (121) and (122). We can see that Ps and Sps are indexed by accusative prefixes, while As and Sas are indexed by nominative proclitics.[14]

[12] It is possible that the examples in (119) and (120) are transimpersonal constructions, and that a (perhaps somewhat abstract) 3SG causing A has been pro-dropped from the clause. Constructions of this type are discussed in more detail in section 7; see also Malchukov, this volume.

[13] Jones (1986) discusses Yawa, and while Yawa clearly has a split in marking for different Ss, it is not clear if this is a two-way or three-way split.

[14] Agreement is complicated in Saweru by the fact that nominative agreement is by a proclitic to the VP. This means that in this SOV language the nominative agreement is separated from the V in

TABLE 2.8. Marking possibilities in Muskogean or Yapen languages

S can be:	If A is …	… then P can be:
NOMINATIVE	NOM	ACC or DAT
ACCUSATIVE	ACC	ACC or DAT
DATIVE	—	

Saweru: Basic bivalent and monovalent clauses

(121) a. ***Mo***=*na-ba-i.*
3SG.F.NOM=2SG.ACC-hit-TNS
'She hit you.'

b. *No*=***ra***-*ba-i.*
2SG.NOM=3SG.F.ACC-hit-TNS
'You hit her.'

(122) a. ***Mo***=*rayan-i.*
3SG.F.NOM=swim-TNS
'She swam.'

b. ***Ra***-*teson-i.*
3SG.F.ACC-diarrhoea-TNS
'She has diarrhoea.'

So far the language appears to show a simple semantic alignment system, similar to many of the other languages examined already. In Saweru, the determining factor for the use of accusative agreement for an S is control: accusative Ss are uncontrolled (though some nominative Ss are also uncontrolled). Less common predicate types show further complications. Dative suffixes are used, in some cases, on the verb to index either an S or a P, as in (123). The use of dative agreement implies a low degree of affectedness on the part of the argument in question.

Dative agreement

(123) a. *Manano*-***inai***.
lonely-1SG.DAT
'I'm lonely.'

b. *Mo*=*komi*-***inai***.
3SG.F.NOM=look.for-1SG.DAT
'She looked for me.'

Further agreement patterns are found with the use of accusative prefixes to index a non-volitional A. In (124a) we can see the accusative prefixes indexing the A, which is not in control of the event, and the dative prefixes indexing the P, which is unaffected. In (124b) both the A and the P are indexed by means of accusative prefixes, on this bipartite verb stem.

Bivalent verbs with non-nominative subjects

(124) a. ***Ra***-*meme*-***inai***.
3SG.F.ACC-think.of-1SG.DAT
'She's thinking of me.'

b. ***Ra***-*ne*-***na***-*mari.*
3SG.F.ACC-forget-2SG.ACC-forget
'She forgot about you.'

the event of there being a nominal object, as in the following sentence based on (121b), employing the noun phrase *arian-o ruama* 'girl': *No*=[*arian-o ruama*] *ra-ba-i* 'You hit the girl.'

Koasati shows a very similar pattern. (125)–(127) show the three different coding choices with monovalent verbs; for each of the nominative, accusative, and dative possibilities a sample of verbs showing this pattern has been given.

Koasati: monovalent

(125) a. *aɬí:ya-l*
go-1SG.NOM
'I go.'

b. *aɬ-cí-:y*
go<2SG.NOM>
'You go.'

(*há:lon* 'hear', *ó:tin* 'gather', *í:sin* 'take one thing', etc.)

(126) a. *ca-ficcák*
1SG.ACC-be.jealous
'I am jealous.'

b. *ci-ficcák*
2SG.ACC-be.jealous
'You are jealous.'

(*íllin* 'die', *okoyá:pan* 'be lonely', *(i)lhó:sin* 'be lost, forget', *támmin* 'fall')

(127) a. *am-aká:n*
1SG.DAT-be.hungry
'I am hungry.'

b. *cim-aká:n*
2SG.DAT-be.hungry
'You are hungry.'

(*hópan* 'be.hurt/be.sick', *ayóhkin* 'feel.acrophobia')

As with Saweru, while the 'basic' coding pattern for bivalent verbs is nominative-accusative, as in (128), other combinations are also found. Only one example of these different possibilities, showing a nominative-dative predicate, is given, though all of the combinations promised in Table 2.8 are attested.

(128) *mán haci-hí:ca-li-laho-ṽ*
again 2PL.ACC-see-1SG.NOM-IRR-phrase.final
'I will see you all again.'

(129) *cim-há:lo-li-laho-ṽ*
2SG.DAT-hear/obey-1SG.NOM-IRR-phrase.final
'I will obey you.'

2.6.2 *Economical use of two markers*

Three-way splits in monovalent subject coding can be achieved in ways other than having three morphologically distinct paradigms. The use of two paradigms to create three classes of verbs is common in eastern Indonesia (Donohue 2004b), and will be illustrated here with data from Nuaulu (Austronesian, Indonesia; Bolton 1990: 36–42). In this language, prefixal agreement is obligatory on all verbs, while suffixal agreement is only used to mark the P of a bivalent clause, or (in combination with the prefixes) the Sp of a stative monovalent clause. As can be seen in (131b), even though the Sp is marked by suffix, the nominative prefix is still obligatory; the suffixes cannot be used on eventive verbs such as *anamana* in (131a), so we can clearly talk about there being two morphologically distinct classes of verb based on the agreement strategies found on the verb.

Nuaulu: bivalent

(130) a. ***U-sosa-i.***
1SG-rub-3SG
'I'm shining it.'

b. *Ina-ku* *i-hita-**ku**.*
mother-1SG.POSS 3SG-hit-1SG
'My mother hit me.'

Monovalent: prefix for both Sa and Sp, suffix obligatory for Sp

(131) a. ***U-anamana.***
1SG-speak
'I'll speak.'

b. ***U-ampeta-ku.***
1SG-wet-1SG
'I am wet.'

In addition to these two monovalent verb classes, one showing agreement by prefix and one by prefix and suffix, there is an additional class of intradirective verbs (roughly, motion verbs, the class of verbs whose sole argument is simultaneously an agent and also a theme), for which agreement by prefix is obligatory and suffixes are optional. There is no reported semantic distinction between the use of a single agreement affix, as in (132a), and double exponence, as in (132b), so treating this semantically unified class of verbs as showing labile behaviour is not easily justified. While this does not represent a clear and undeniable case of a three-way split such as was seen in the Muskogean or Yapen languages, it does nonetheless distinguish three semantically defined classes of verbs.

(132) Monovalent: intradirective

a. ***U-eu*** *ria.*
1SG-go inland
'I'll go inland.'

Prefix obligatory, suffix optional

b. *Ia* ***i-hoka-i*** *tewa.*
3SG 3SG-go-3SG NEG
'He didn't come.'

A similar economical use of only two marked options to code a three-way set of distinctions can be found in Haida (Enrico 2003). Pronouns show two different sets, which Enrico calls the 'agentive' and 'objective' sets. Additionally, a small set of verbs can occur with either the agentive or the objective set pronouns, and this set of verbs shows a relatively consistent semantics.[15] Just as with the Muskogean and Yapen languages, this versatility of S-marking also extends to A-marking. Table 2.9 shows examples of the coding options for Ss and As with different verbs.[16]

The systems seen in this section do *not* have simply one way to mark As, with some Ss marked in the same manner, and one way to mark P, with some other Ss marked in that manner. Rather, the marking system allows for a split in As and (in Muskogean and Yapen) a split in Ps. What we have is a coding system which

[15] The fact that in Haida the verbs showing the split behaviour include bodily or mental acts that are susceptible to different degrees of control suggests that a 'labile' analysis, in which verbs such as 'sneeze' can be treated as more or less controlled, is warranted.

[16] Some verbs vary in their coding options between the Masset and Skidegate dialects. There does not appear to be any consistent relationship between the two dialects in terms of alignment coding. Thus *sk'al.aaw* 'have diarrhoea' is objective in Masset, and shows variation between agentive and objective in Skidegate. *Q'usahlda* 'cough' is agentive (M), or variable (S), and *q'anda* 'belch' is variable (M) or agentive (S). See Mithun, this volume, for further discussion of the complexities of semantic alignment in Haida.

Table 2.9. Haida three-way coding split

	Monovalent	Bivalent
Agentive subject	*rad* 'run', *srayhla* 'cry', *kusad* 'fart', *qaa* 'come/go',	*qing* 'see, look at', *da.a* 'have, keep', *qii.a* 'find, receive'
Objective subject	*skaak'shda* 'hiccup', *dladahlda* 'fall down', *sk'al.aaw* 'have diarrhoea', *q'i.id* 'remember PP', *kaa.àyda* 'feel and act playful'	*q'ala* 'be unaquainted with', *gyaa7alaa* 'resemble', *gu'laa* 'like'
Agentive/objective subject	*skin.ang* 'keep waking up', *hats'asaa* 'sneeze', *q'anda* 'belch', *7anngung* 'be curious about PP'	*tlagang* 'vomit up'

is much more sensitive to semantic distinctions everywhere than is one which really cares about A, S, and P. Should this be described as semantic alignment, or simply semantically explicit marking? Crucially, is there a principled difference between the two labels? If we accept coding in semantically explicit ways as a form of semantic alignment, then a number of semantically motivated morphosyntactic splits (or at least splits that have semantic origins) should perhaps be considered under this label.

2.6.3 *Icelandic*

In northeastern Europe we find a split in the coding of Ss in Icelandic, a language that has received a great deal of attention from syntacticians (see e.g. Andrews 1990a, 1990b, 2001, Eythórsson and Barðdal 2005, Faarlund 2000, Rögnvaldsson 1994, Van Valin 1991, Zaenen and Maling 1990, Zaenen, Maling, and Thráinsson 1985). Because the Icelandic data have been so well studied, and because they show so many interesting features, I shall present a number of features associated with grammar, while noting that I am not even attempting to describe the well-documented diachronic situation.

Empirically, we can observe a four-way split in the coding of Ss in Icelandic, with any one of four cases, nominative, accusative, dative, or genitive, being used to mark these arguments, depending on the verb used. This complex set of case-marking alternatives corresponds to a split in case possibilities for As, and a similar split for Ps (though the possibilities available for the marking of a P are restricted by the choice made for the A). Examples of the possibilities for marking monovalent subjects are shown in (133)–(137). Note that the 'default' nominative case can be used not only for activities, such as in (133), but also for non-agentive events such as sinking, as seen in (134). Dative subjects are generally experiencers, such as in (135), while accusative subjects typically involve a lack of control. There

are too few genitive subjects to try to characterize this group semantically, and in the modern language they are very unstable (though see the literature cited above).

Icelandic

(133) *Stelpurnar hláu.*
the:girls:NOM laughed:PL
'The girls laughed.'

(134) *Skipið sökk.*
the:ship:NOM sank
'The ship sank.'

(135) *Mér er kalt.*
1SG.DAT is cold
'I am cold.'

(136) *Drengina rak á land.*
the:boys:ACC drifted to land
'The boys drifted to land.'

(137) *Vindsins gætir ekki.*
the:wind:GEN matters not
'The wind does not matter.'

The very loose semantic characterizations given above obviously lead to the possibility of semantically similar arguments being assigned different cases by different verbs, and thus of there being evidence of degrees of lexicalization. This is indeed the case; in (138) and (139) we see two verbs which are semantically extremely similar, but which assign different cases to their subjects.[17]

(138) *Mig velgir við setningafræði.*
1SG.ACC am.nauseated by syntax
'I am nauseated by syntax.'

(139) *Mér býður við setningafræði.*
1SG.DAT am.nauseated by syntax
'I am nauseated by syntax.'

Furthermore, we can note the existence of what might be termed 'covert quirky case' subjects in Icelandic. The reflexive verbs in (140) and (141) both take nominative subjects, but the obligatory reflexive element can be accusative, as in (140), or dative, as in (141). Once more there is a split in the case marking of monovalent predicates, though it is disguised.

(140) *Hann ræskti sig.*
3SG.M.NOM clear.throat self:ACC
'He cleared his throat.'

(141) *Hann snýtti sér.*
3SG.M.NOM blow.nose self:DAT
'He blew his nose.'

In (142)–(144) we can see a few of the possible combinations of case found with bivalent verbs. The most common case frame is nominative-accusative, but other cases may appear on the object, as seen in (143) and (144). While

[17] There is also the well-discussed phenomenon of 'dative sickness', whereby objects that are expected to appear in accusative case are starting to appear with dative case endings (see e.g. Smith 1994). Similarly, non-nominative subjects are being replaced by nominative ones, and genitive objects are being replaced by either accusative objects or arguments inside PPs.

we cannot state that certain semantic roles are assigned to particular cases, it is generally true that dative-marked objects are experiencers (this characterization is more successful than an attempt simply to characterize dative-marked subjects).

(142) *Strákurinn kitlaði stelpuna.*
the:boys:NOM tickled the:girls:ACC
'The boys tickled the girls.'

(143) *Han bjargaði mér.*
3SG.M.NOM saved 1SG.DAT
'He saved me.'

(144) *Ég mun sakna hans.*
1SG.NOM will miss 3SG.M.GEN
'I will miss him.'

Furthermore, the subject of a bivalent may also appear in a non-nominative case, and if that happens then the nominative may be used for the object (there are no double-nominative case frames), as seen in (145)–(147).

(145) *Stúlkuna vantar efni í ritgerðina.*
the:girl:ACC lacks material in the:paper:NOM
'The girl lacks material for the paper.'

(146) *Stráknum líkar slíkir bílar.*
the:boy.DAT likes such cars:NOM
'The boy likes such cars.'

(147) *Barninu batnaði veikin.*
the:child:DAT bettered the:disease:NOM
'The child recovered from the disease.'

As with the monovalent examples in (138) and (139), it is possible to find bivalent predicates that are semantically very similar, and yet which take different case frames. This means that the event structure and semantic roles of the arguments of two different verbs can be extremely similar, without this dictating that the case frames for the two different predicates are identical.

(148) *Hann hjálpaði mér.*
3SG.M.NOM helped 1SG:DAT
'He helped me.'

(149) *Hann aðstoðaði mig.*
3SG.M.NOM assisted 1SG:ACC
'He assisted me.'

For some verbs involving incremental themes we can identify different senses correlating with different case patterns, (150) and (151); for these verbs, the dative is commonly used to mark a human P, rather than a non-human one (see Barðdal 1993, Svenonius 2002a). (The accusative is also grammatical for the human Ps, but the dative cannot be used with a non-human P.)

(150) *Hann ðvoði gólfið.*
3SG.M.NOM washed the:floor:ACC
'He washed the floor.'

(151) *Hann ðvoði barninu.*
3SG.M.NOM washed the:child:DAT
'He washed the child.'

An accusative-dative alternation is also found in cases that can be considered analogous, in an abstract way, to the dative alternations that are found in English. In (152) we see the verb for 'scratch' used with an accusative object, while in (153) the same verb appears with an object that can be construed as an beneficiary, and this object is marked with the dative.

(152) *Kötturinn klóraði mig.*
the:cat:NOM scratched 1SG.ACC
'The cat scratched me.'

(153) *Ég klóraði kettinum.*
1SG.NOM scratched the:cat:DAT
'I scratched the cat.'

A similar alternation exists with verbs denoting directed motion away from the subject, depending on whether the object of the verb is the affected target or the instrument propelled. The is analogous to the use of dative case with verbs of propelled motion that do not involve the accompaniment of the subject, compared to the use of accusative on objects that are propelled without the subject accompanying (assisted motion); examples of these two different verb classes are shown in (154) (Svenonius 2002a).

(154) a. *skjóta fuglinn*
shoot the:bird:ACC
'shoot the bird'

b. *skjóta kúlunni*
shoot the:bullet:DAT
'shoot the bullet'

(155) a. *draga* ACC 'pull, drag'
færa ACC 'move, bring'
hækka ACC 'raise

b. *kasta* DAT 'throw, fling, hurl'
henda DAT 'throw away, discard'
velta DAT 'roll (a barrel)'

Other verbs show alternations similar to these based on whether the object is a field or a theme; field takes accusative case, while themes that are removed from the field to which the predicate is applied appear in dative case (Svenonius 2001, 2002b).

(156) *Hann sópar gólfið.*
3SG.M.NOM sweeps the:floor:ACC
'He sweeps the floor.'

(157) *Hann sópar ruslinu í poka.*
3SG.M.NOM sweeps the:garbage:DAT in bag
'He sweeps the garbage into a bag.'

This sketch by no means exhausts the possible discussion of case in Icelandic, but it adequately serves to demonstrate the fact that there are multiple splits in the coding choices available to As, Ss, and Ps in the language. The split in the marking of Ss corresponds somewhat to semantic categories, but is also to a large extent lexicalized (a common fate for such morphological processes in these languages). The overwhelming tendency is for arguments of any semantic role to be accommodated in a nominative(-accusative) case frame.

These examples show that different kinds of motion away from the subject are as important in characterizing the classes of verbs that govern different cases as are more argument-based semantic notions such as bearing a semantic role of 'experiencer'. The fine aspectual distinctions seen in (154)–(157), and the fact that verbs with very similar semantics can display different case possibilities, suggests that the split in marking is no longer strongly dependent on semantic roles, but is moving towards being more of an aspectually governed system. A similar state of having more than one semantic factor underlying the split in marking of S in the clause is shown for Otomi (Palancar, this volume), while the notion that the kind, or direction, of motion can have a bearing on argument coding is also explored for two South American languages Pilagá (Vidal, this volume) and Guaraní (Velázquez-Castillo, this volume).

We should ask whether this sort of multiple splitting of argument-encoding options is the same kind of alignment as is found in, say, Warekena or even that or the simpler Waris. It is true that there is a nominative set of verbal agreement suffixes in the language that link S to A, but the case-marking system is more complex than that, with some Ss being coded in the same way as canonical As, while some are coded as canonical Ps. We have seen there is no reason to disallow a semantic alignment analysis simply because there is a split in the coding of alignment across different primary coding devices, and that one part of the grammar might be aligned semantically (the case system in Icelandic), while another might be arranged more syntactically (the Icelandic agreement system). In the following section I present an account of Tagalog, a well-known Austronesian language. Here the nominal case-marking system cannot be said to show semantic alignment, but the verbal affixation shows strong semantic leanings.

2.6.4 *Tagalog*

In Tagalog, an Austronesian language of the northern Philippines (see Schachter and Otanes 1972, Schachter 1976, Kroeger 1993, and many others), verbs appear with one affix, which indexes which participant in the clause has the status of subject (see Tsukida, this volume, for a discussion of similar behaviour in Amis, another Austronesian language with a similar morphosyntactic profile; similar behaviour is found in most northern Austronesian languages). Table 2.10 shows the different affixes that are used to encode As, Ss, and Ps as subjects on the verb;

Table 2.10. Verbal affixation and syntactic roles in Tagalog

A	S	Characteristics of S?	P
mag*luto*	***mag****bus*	(default)	
'cook'	'catch a bus'		
*h**um**uli*	*d**um**ating*	'casual action'	
'catch'	'arrive'	'natural events'	
mang*anak*	***mam****undok*		
'bear a child'	'live in the mountains'		
maka*limot*	***maka****raos*	[non-volitional]	
'forget'	'be over'		
ma*tuto*	***ma****bingi*	'acquisition of the	***ma****kita*
'learn'	'become deaf'	property expressed by the adjective'	'see'
	ma*lamig****an***	'experiencing the	***ma****limut****an***
	'feel cold'	quality'	'forget'
	*pawis****an***	[pseudo-transitive	*hawak****an***
	'sweat'	and adjunct verbs in the majority]	'hold'
	i*kaway*	'movement of some	***i****luto*
	'wave a hand'	part of the body'	'cook'
	*antuk****in***	'being infected'	*h**in**iwa*
	'feel sleepy'		'cut'
			ipag*tiis*
			'endure'
			pa*kinggan*
			'listen to'

there is a great deal of lexical stipulation of affix identity for different roots, but the less common classes formed do show general semantic clusterings.[18] The primary (in terms of lexical frequency and productivity, and extensibility into smaller lexical classes) coding options for clauses in which an A or an S is the subject are the affixes *mag-* and *-um-*, and for Ps *-in*, as shown in (158). Here we have examples of the most semantically bleached affixes, the infixes *-um-* and *-in-*, being used to mark the A or the P (respectively) of the clause as the subject; morphologically, the subject is indicated by the use of the nominative case (*ang* with common nouns) on the subject NP; syntactically a host of constructions favour this argument (Kroeger 1993 presents the data most clearly). The non-subject appears in genitive case.

[18] Many of these same affixes, particularly those from the bottom of the different columns, are also used to index a dative argument (D), or a range of other adjuncts.

Tagalog

(158) a. *P<**um**>utol **siya** ng punungkahoy.*
cut<UM> 3SG.NOM GEN tree
'He cut trees.'

b. *P<**in**>utol niya **ang puno ng mangga.***
cut<IN> 3SG.GEN NOM tree GEN mango
'He cut down the mango tree.'

In (159) we can see the same affixes used with monovalent verbs, indexing a more agentive, and less agentive S. The use of *-in-* with monovalent verbs is rare, with *mag-* and *-um-* generalizing as nominative markers.

(159) a. *D<**um**>ating **siya** sa halamanan.*
arrive<UM> 3SG.NOM DAT garden
'He arrived in the garden.'

b. *<**In**>a-antok **siya**.*
RED<IN>-sleepy 3SG.NOM
'He's sleepy.'

Another verb such as *bukas* 'open' marks the A or P as subject with a different paradigm of affixes.Here the marker for A-as-subject is the generic *mag-*, while the marker for P-as-subject is *-an*, historically an applicative that now marks low-affect Ps. Note that a monovalent use of the verb is also possible, as shown in (160c), using the infix *-um-*.

(160) a. ***Mag**-bukas **siya** ng pinto.*
MAG-open 3SG.NOM GEN door
'He opened a door.'

b. *Buks-**an** niya **ang pinto.***
open-AN 3SG.GEN NOM door
'He opened the door.'

c. *B<**um**>ukas **ang pinto** sa lakas ng hangin.*
open<UM> NOM door DAT strong GEN wind
'The door opened in the strong wind.'

We have seen that the same morphology that indicates an A-as-subject in (158a) can also be used to shown an S-as-subject, in (159a) and (160c). As can be seen in Table 2.10, approximately half of the affixes that can be used to index an S are also used with As, and half of them are also used with Ps, with one prefix, *ma-*, being employed for all three syntactic roles with different verbs (it is no accident that *ma-* is also a productive derivational affix to a degree that is not true for the other affixes shown here). Table 2.10 also offers a rough characterization of the qualities of an S that are marked with the different affixes (following Schachter and Otanes 1972); to various extents these characterizations also apply to the A

TABLE 2.11. Common correspondences between verbal affixes for A and P in Tagalog

A	P	Example
mag-	*i-*	*balita* 'tell something'
	-in	*alis* 'remove'
	ipa(n)g-	*tiis* 'endure'
	-an	*bantay* 'watch'
-um-	*-in*	*bati* 'greet'
	-an	*hawak* 'hold'
mang-	*-in*	*kailangan* 'need'
	ipa(n)g-	*anak*'bear child'
	-an	*kuwalta* 'rob'
	pa((n)g)- -an	*nood* 'watch'
maka-	*ma- -an*	*limut* 'forget'
	ma-	*kita* 'see'
ma-	*pa((n)g)- -an*	*kinig* 'listen to'
	ma- -an	*tuto* 'teach'

and P arguments marked by these affixes. In (161) we can see the same prefix *ma-* used to index either an A, an S, or a P, depending on the verb used; note that with an S the use of *ma-* implies an inchoative event, while the same predicate without the *ma-* is interpreted statively. (162) shows sentences corresponding to (161a) and (161c) in terms of verb selection that mark the other argument as the subject of the clause. Common correspondences between A-marking affixes and P-marking affixes are shown in Table 2.11.[19]

Tagalog

(161) a. ***Ma**-tuto ng matekatika **ang mga bata.***
MA-learn GEN maths NOM PL child
'The children learn maths.'

b. ***Ma**-bingi **ang lolo.***
MA-deaf NOM grandfather
'The grandfather became deaf.'

c. ***Ma**-kita ng maestra **ang mga bata.***
MA-see GEN teacher NOM Pl child
'The teacher saw the children.'

[19] Sells (1998) suggests that the 'voice markers' in Philippine-type languages such as Tagalog can best be thought of as pronominal affixes. This analysis would result in the semantic split in verb marking 'fitting in' more closely with the analysis of other languages discussed here.

(162) a. ***Ma**-tutu-**an** ng mga bata **ang matematika.***
MA-learn-AN GEN PL child NOM maths
'The children learn the maths.'
b. ***Maka**-kita ng mga bata **ang maestra.***
MAKA-see GEN PL child NOM teacher
'The teacher saw children.'

As with Icelandic, the marking found with different predicates is not unique to monovalent clauses, and the same attention to semantic distinctions is found in bivalent clauses as well. There is quite a degree of lexicalization in the choice of affixes with different Tagalog verbs, just as different predicates, even semantically very similar ones, can show different case arrays in Icelandic.[20] The Tagalog affixes have variously been argued to be derivational, inflectional, or pronominal; the ultimate analysis will most probably combine these different characterizations.

2.6.5 *Kolana*

Kolana is a non-Austronesian language of eastern Alor, in southern Indonesia. Prefixes show agreement on the verb in Kolana, but only for S or P arguments (Donohue 2004b). We can, therefore, say that there are absolutive prefixes on verbs; this can be seen in (163).

		Kolana: bivalent			Monovalent
(163)	a.	***Geta***	*n(a)-poin.*	b.	***N(a)**-tati.*
		3SG.ERG	1SG.ABS.I-hit		1SG.ABS.I-stand
		'She hit me.'			'I stood up.'

In addition to the most general prefixes (exemplified for 1SG in (163)), there are two more prefix sets. In both cases they are available to mark agreement only for Ss and Ps, and so are also absolutive prefixes. The kinds of predicate that can be marked with the set II and set III prefixes are more semantically restricted than are found with the set I prefixes, the examples in (164) and (165) being representative of their classes. Here we have a language with syntactic alignment, in that the primary split is between the A and the S,P grouping, which introduces a set of semantic divisions within this absolutive category.

(164)	a.	***Geta***	*nai-suai.*	b.	***Nai**-lalan*
		3SG.ERG	1SG.ABS.II-stab		1SG.ABS.II-fever
		'She stabbed me.'			'I have a fever.'
(165)	a.	***Geta***	*nadi-modo.*	b.	***Nadi**-wiri.*
		3SG.ERG	1SG.ABS.III-discard		1SG.ABS.III-cold
		'She discarded me.'			'I'm cold.'

[20] For instance, in addition to *kita* 'see', which inflects for AV and PV with *maka-* and *ma-*, respectively, we also find *tingin* 'watch', which inflects with *-um-* and *-an*.

The alignment found in Kolana suggests strongly that an earlier, 'cleaner' system of semantic alignment is in the process of being replaced by a more syntactically governed one. The fact that other languages related to Kolana, such as Bunak (section 2.5.1) and Oirata (de Josselin de Jong 1937, Donohue and Brown 1999), have all but lost the semantic aspects to their agreement, and others such as Kui have accusative prefixes (with a semantic split), supports this position (see Klamer, this volume, for further data on languages related to Kolana and Bunak). The Tanglapui data in the following section show another way in which semantic factors maintain a tenuous presence in the alignment system of a language of this family.

2.7 A split in 'intransitives'? Approaching 'S' via P and the limits of 'semantic alignment'

Another major construction type that impinges on the typology of semantic alignment involves the so-called 'transimpersonal' constructions, constructions in which the verb (at least) is formally transitive, but the clause shows the behaviour of an impersonal construction, in that the subject does not appear in the case normally associated with monovalent subjects (see Malchukov, this volume, and Nichols, this volume, for further discussion of the implications of viewing this construction as an instance of semantic alignment, and Mithun, this volume, for thoughts on the role played by this construction in the evolution of semantic alignment systems).

In Tanglapui (Trans New Guinea, Alor, southern Indonesia; Donohue 1996b, and Klamer, this volume) we can observer a split in the coding of monovalent clauses by the use of the inverse prefix on verbs with either an affected P or an affected Sp. (166) shows that monovalent clauses with non-affected Ps do not require use of the inverse, while in (167) we can see that when the P is affected by the predicate, and the P outranks the A in terms of the animacy hierarchy, the inverse prefix *na-* must be used.

Tanglapui: bivalent: non-affected P

(166) a. *Ya-di-a.*
2SG-see-ASP
'You saw (her/him/it).'

b. *Di-a.*
hit-ASP
'(He/It/She) hit (you/her/him/it).'

Bivalent: affected P

(167) a. *Ya-baba.*
2SG-hit
'You hit (her/him/it).'

b. *Ya-**na**-baba.*
2SG-INVERSE-hit
'(He/It/She) hit you.'

When we examine predicates with a single argument we see a similar split in behaviour: when the argument (the S) is not affected, by the predicate, the verb appears with the agreement prefix alone. When the single argument of the predicate *is* affected, the agreement prefix appears in conjunction with the inverse

prefix. In other words, the affected S is formally coded identically to an affected P—but not identically to ALL Ps.

Monovalent: non-affected and affected S

(168) a. *Ya-ve*
2SG-go
'You went.'

b. *Ya-**na**-tansi.*
2SG-INVERSE-fall
'You fell.' ('it fell you' ?)

If we consider this to be an instance of semantic alignment, then a range of other transimpersonal constructions need to be considered. In Skou (Macro-Skou family, north-central New Guinea), a number of predicates code the experiencer as the object of the clause. Thus in (169) the burper is coded as the object of the clause, clearly signalled as such by the use of *láng*, a suppletive form of the verb 'hit' used with feminine objects. In (170) *lóengri* 'snot' is the subject of the clause, insofar as it determines the use of 3SG.F forms of the verb, though notice that *nì* '1SG' occupies the clause-initial position. This suggests that there are some subtle differences in the way the predicates 'burp' and 'be snotty' are conceptualized, as well as encoded.

Skou

(169) ***Oe*** *pe* ***ke**=láng.*
burp 3SG.F 3SG.NF=burp
'She burped.'
(literally, '(A) burp hit her.'; the verb is phonologically identical to 'hit (FEM.OBJ)')

(170) *Nì* ***lóengri tue*** *e* *tue.*
1SG snot 3SG.F.do 3SG.F.be 3SG.F.do
'I'm full of snot.'

The kind of impersonal constructions seen in Skou are common in many parts of the world, including New Guinea. Tauya (Trans New Guinea, Papua New Guinea; MacDonald 1990) is one such language. (171) shows the experiencer marked as the P of the verb *sepame* 'sick', though there is no nominal representing an A in the clause, only the S,A suffixes. In (172) we have a similar construction, with the experiencer marked as the P of the clause even though this is a bivalent clause with an obliquely marked second argument. It is clear that the *-ʔa* suffix is purely pleonastic.[21]

Tauya

(171) ***Ya** -sepame-ti-a-ʔa.*
1SG.P-sick-INTENS-3SG.S/A-IND
'I am really sick.'

[21] Donohue (2005b) discusses these constructions in New Guinea languages, arguing that the P-coded arguments are in fact objects, and not subjects with 'quirky' agreement patterns.

(172) *Na-ra awa na-pi-pe* ***na****-ʔisafe-a-ʔa.*
2SG-TOP father 2SG-GEN-BEN 2SG.P-angry-3SG.S/A-IND
'You're angry at your father.'

Warembori is (probably) an Austronesian language from northwest New Guinea. In Warembori we find similar examples of experiencer-as-object constructions. In some cases there is an overt cause mentioned in the clause, such as *monggena* in (173). In others the cause must be incorporated into the verb, as seen in (174), and in (175) we can see a construction similar to that found in Nuaulu (section 2.6.2).

Warembori (Austronesian, Donohue 1999b: 41–2)

(173) *Mongge-na ban-**e**-o.*
snot-PL make-1SG.P-IND
'(My nose) is running with snot.'

(174) *Doro-pai-tan-**e**-o.*
rain-affect-APPL-1SG.P-IND
'I got soaked by the rain.'

(175) ***A****-vaitumban-**e**—o.*
1SG-tired-1SG.P-IND
'I'm tired.'

Another construction similar to the inverted clauses here forming a minor part of its repetoire is Tukang Besi (Austronesian, central Indonesia: Donohue 1999a: 96, 134). Tukang Besi is not part of the New Guinea 'area', and makes less use of these constructions than languages in New Guinea, but nonetheless shows some experiencer-as-P codings. In (179) we can see another example of the double marking that we saw in Nuaulu and Warembori (for further examples of this type of morphosyntax in the eastern Indonesian area, see Donohue 2004b).

Tukang Besi

(176) *No-motiti=**aku** te 'oloo s<um>io.*
3REAL-dry=1SG.P core sun afternoon.SI
'I dried in the afternoon sun.'
(~ 'The afternoon sun dried me.')

(177) *No-raho=**kami** te wande.*
3REAL-affect=1PA.P CORE wind
'We were tossed about in the wind.'
(~ 'The wind affected us.')

(178) *O-raho=**'e** te watu.*
3REAL-affect=3P CORE stone
'He banged himself on a stone.'
(~ 'A stone affected him.')

(179) ***To****-langke-nono'o-**ngkita**.*
1PL.REAL-sail-be.six-1PL.NUM.P
'Six of us went sailing.'

Ambai is another Austronesian language of northwest New Guinea, probably reasonably closely related to Warembori (Silzer 1983). Basic clauses see an S or an A preverbal, with agreement on the verb, and the P postverbal, appearing either as a separate (pro)nominal, or (for 3rd persons) as a suffix on the verb. Examples are shown in (180)–(183). In (180) we can see a preverbal A, and in (181) and (182) are two examples of preverbal Ss. A postverbal P is shown in (183).

(180) *Yau y-eo y-ang diang.*
1SG 1SG-want 1SG-eat fish
'I want to eat fish.'

(181) *Yau i-minohi na Warironi.*
1SG 1SG-live PREP Warironi
'I live in Warironi.'

(182) *Yau i-matai i-fafa we reirei.*
1SG 1SG-afraid 1SG-swim PREP shore
'I was afraid and swam for shore.'

(183) *D-eti yau kaha.*
3SG-see 1SG NEG
'He didn't see me.'

There are two exceptions to this characterization. First, a number of verbs require a reflexive subject, in that a free pronoun must appear in the object position as well as there being nominative agreement on the verb. The verbs that behave in this way are all verbs of motion, and their behaviour is identical to that of predicates with reflexive objects, such as seen in (186).

(184) a. *I-karobu yau na airauri.*
1SG-dive 1SG PREP water
'I jumped/dove into the water.'
b. **I-karobu na airauri.*
'I jumped/dove into the water.'

(185) a. *Aha mani y-arabera yau ma.*
tomorrow TOP 1SG-return 1SG HITHER
'Tomorrow I'll return here.'
b. **Aha mani y-arabera ma.*
'Tomorrow I'll return here.'

(186) a. *D-eparandin-i.*
3SG-praise-3SG
'He glorified himself.'
b. *Y-eparanding yau.*
1SG-praise 1SG
'I praised myself.'

The other exception involves predicates of a different syntactic category. When a nominal predicate appears with the copular *di*, the pronoun must appear following the copular. Rather than considering this to be an 'accusative' subject, it is better to think of it as an inverted clause, in which the predicate is initial, rather than the subject being initial (see the Tukang Besi examples in (35) and (36) for another example of nonverbal clauses showing a different syntax to verbal clauses).

(187) (*Yau mani*) *mam-biriu di yau.*
1SG TOP NOM-strong COPULA 1SG
'I'm the champion.'

Northern Australia is another area that shows similar transimpersonal constructions (Walsh 1987). In Ndjébbana (MacKay 2000: 270, 272) the verb in (188) is simply 'I sit'. (188), however, also contains the nominal *barakángka*. This nominal is part of the construction with 'sit' that specifies '(be) worn out', and the predicate can be considered as a complex N+V predicate with 'regular' coding of the S. In (189), however, the agreement on the verb is 3rd person, clearly agreeing with *mangúya*, a nominal that is logically the possessor of the experiencing S.

Ndjébbana

(188) *Barakángka* ***nga****-nó-ra.*
worn.out 1MINIMAL.S-sit-CONTEMPORARY
'I'm worn out.'

(189) *Mangúya* ***ka****-ddjúwa ka-nó-ra.*
throat 3MINIMAL.S-suffer 3MIN.S-sit-CONTEMPORARY
'I'm really sad.'

Similar constructions are found in a great range of languages, including those of western Europe. While this is archaic in English (in idioms such as *methinks*), we find that it is productive in Dutch, as in (190)–(192). In (190) the experiencer of the 'cold' adjectival predicate is marked in accusative case, with a pleonastic 'subject' and 3rd person singular verb agreement. In (191) the subject is marked in nominative case, and the verb shows the lack of overt agreement that is characteristic of 1st person singular in the present tense, but a reflexive 'object' also appears in the clause. (192) shows a pattern similar to that in (190), with a verbal predicate, and pragmatic fronting of the experiencer.

Dutch

(190) *Het is* ***mij*** *te koud.*
it is 1SG.ACC too cold
'I'm cold.'

(191) ***Ik*** *voel* ***me*** *niet goed.*
1SG.NOM feel 1SG.ACC not good
'I don't feel well.'

(192) ***Mij*** *lijk-t het niet gezellig.*
1SG.ACC strike-2/3SG it not 'cozy'
'I find it impersonal.'

The material in this and the previous section suggests that we should perhaps consider a analysis of some of the data as not involving split-intransitive phenomena.

While they clearly represent semantic alignment, a more detailed examination of the syntax of these languages might reveal that many of the non-agentive S arguments are in fact Ps, with pleonastic (or elided) 'dummy' subject. For instance, in (193) we have an example of a non-agentive verb from Lakota (Boas and Deloria 1941: 81). Given that 3rd persons do not show agreement on the verb, it is hard to see why (193) could not be analysed as also showing a null 3rd person, such as the Dutch example in (190), with more literal translations resembling 'it chills me'.

(193) *ma-c'úwita*
1SG.NONACTIVE-cold
'I am cold.'

(194) *(Ø-)ni-c'ikšã*
2SG.NONACTIVE-wrestle
'He wrestles with you.'

We have seen that in many languages in which an S shows more than one coding option, either the A or P will also show variation in coding. This is not a feature unique to languages with semantic alignment realized in the behaviour of single-argument verbs; in English it is well known that not all Ps are encoded with the same morphosyntax, as can be seen in examples (195)–(197), showing the conative construction and the alternations in P encoding that this construction requires. As indicated, the use of the conative in (195a) implies a more agentive event than that encoded without the conative, while not using the conative implies a greater likelihood of the P being affected, something that is not specified with the conative. Semantically close predicates, such as *look at* and *see* or *listen to* and *hear*, sometimes also show this alternation: the event in which the A must be construed as being more agentive appears with a prepositionally marked object.

(194) a. *The police shot **at** the robbers.* [+ agentive], [± affected]
b. *The police shot the robbers.* [± agentive], [+ affected]

(195) a. *The police looked **at** the robbers.* [+ agentive]
b. *The police saw the robbers.* [− agentive]

(196) a. *The police listened **to** the robbers.* [+ agentive]
b. *The police heard the robbers.* [− agentive]

Of course, most verbs in English do not participate in this construction, but we still see evidence that the semantic conditions evident in the conative alternation carry through to other predicates in which objects are marked with prepositions. In these cases the prepositional object shows a lower degree of affect as a result of the predicate than it would have as the object of a primary transitive verb such as *kill*, *break*, etc.

(197) a. *The police waited **for** the robbers.* [−affected]
b. *The police looked **for** the robbers.* [−affected]

As implied earlier in the discussion of the semantic factors that govern the splits in semantic alignment systems (see section 2.5), the semantic factors that underlie the choice of bivalent verb classes are the same as those we find in 'semantic alignment' systems (Blume 1998, Testelec 1998, Tsunoda 1981, 1985, 1999, and in

Table 2.12. (Pseudo-)transitive verb types

	Control	Affectedness	Examples
I	A, P	–	*speak to*
II	A, P	A, P	*fight with*
III	A > P	–	*ask*, *threaten*
			follow, *meet*
			agree, *resist*
IV	A	P	*make*, *write*
V	A	P > A	*pull*, *take*
VI	A	((A))	*praise*, *search*
VII	–	A, P	*stick to*
VIII	–	A (?)	*see*, *depend on*

passing Donohue 1998). Table 2.12 (adapted from Testelec 1998) illustrates a range of different verb classes that can be distinguished when discussing bivalent verbs.

These same categories are often reflected in monovalent constructions. Toba (Argentina and Brazil, Guaykuruan: Manelis Klein 2001) has three prefixes that are used to mark either S or A (see Vidal, this volume, for a discussion of the related language Pilagá). Just as Kolana can be characterized as displaying a three-way-split *absolutive* system, Toba can be thought of as exhibiting a three-way-split *nominative* system, but with complications. Of the three agreement prefix sets, Set II is the most common set; set III is only found with three verbs, 'be afraid', 'want to go', and 'reach for'. Set I is complex, and is used for predicates that involve some level of (loosely termed) 'centrifugal activity': 'direction inward towards the body', 'reflexivity, patient orientation', or 'reciprocity' (as well as marking possession on nominals).

Toba

(199) ***ña**-pilottak*
1SG.I-WASH
'I'm washing (myself).'

(200) ***s**-iyoGon*
1SG.II-wash.feet
'I wash my feet.'

Table 2.13. Singular agreement prefixes in Toba

	I	II	III
1SG	*ña ñe ñi*	*s*	*ja ji*
2SG	*ʔan ʔana*	*ʔaw ʔawa ʔa(ri)*	*ʔar ʔara ʔari ʔana*
3SG	*n na*	*r ri Ø ya yi*	*na n*

(200) ***ñi**-waGataget so-širaGawa.*
1SG.I-am.fighting CL-several.people
'I was fighting with several people (and they were fighting with me).'

(201) ***so**-waGataget*
1SG.II-am.fighting
'I'm hitting someone (with something like a whip, an outward motion).'

(202) *hayem **ña**-paGana naroqšilaqtak*
I **1SG.I**-educate white.man's.tongue
'I study Spanish.'

(203) *hayem **sa**-paGanek naroqšilaqtak*
I **1SG.II**-educate white.man's.tongue
'I speak Spanish.'

2.8 Semantic alignment: a summary

What can we conclude about semantic alignment? We have said that semantic alignment is:

- a split in the morphological encoding of arguments according to some feature of the lexical semantics of the verb.

The factors that determine these splits tend to involve something to do with *agency*, *affectedness*, or *lexical aspect*. It is also clear that monovalent verbs do not have an exclusive licence on variation according to these parameters; many, if not all, languages have more than one way of encoding two arguments of bivalent predicates. Furthermore, the ways in which variation according to these parameters is marked are often identical for both monovalent and polyvalent predicates; that is, the same case or agreement choices are found with the arguments of both monovalent and bivalent predicates. We therefore need to note that

- Variation in degree of affectedness can be located on the P argument of a polyvalent verb just as well as it can be on the S argument of a monovalent verb.
- Variation in degree of agency can be located on the A argument of a polyvalent verb just as well as it can be on the S argument of a monovalent verb.

Alternations such as the conative in English, or 'quirky case' objects (or subjects), are simply a special case of the same explicit semantic marking found with semantically aligned languages. Or, put another way, the phenomenon known as split intransitivity is a special case of the kind of semantically explicit subsystems that are found in most languages, although generally confined to marking one or other argument of a bivalent predicate. The fact that there is in some cases more

than one possible coding choice for the sole argument of a monovalent verb is a natural consequence of the fact that most languages have more than one, or even two, ways to code the arguments of bivalent predicates. This multiplicity of coding options is clearly a challenge to configurational explanations of semantic alignment ('unaccusativity') which assume that the split in coding reflects two structural positions, one being that of a 'normal' subject and one that of an object.