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Passive typology – the case link

Arthur Holmer

1 Introduction

1.1 Purpose

The purpose of this paper is to present an analysis of passive formation which differs from the standard GB view and treats passivisation as primarily a diathetic change which in some languages (but far from all) entails a valency reduction. I intend to show that the valency consequences of passivisation are a simple result of an interaction of Case-assignment parameters within VP. Specifically, I claim that both SpecVP and [DP, V'] are positions which can be inherently Case-marked, and that Case-marking within VP is subject to language-specific variation. This analysis is indispensable to present a satisfactory account of the voice system (or focus system) in the Austronesian language Seediq¹, but also has explanatory advantages when applied to other languages.

The analysis proposed requires a revision of the standard concept of A-chains (with one θ -role and one Case). On the other hand, it also explains the facts which underlie Burzio's generalisation, and allows us to pinpoint the exact parametric differences between accusative languages, syntactically ergative languages and Austronesian subject-focus languages, and sheds some light onto the case-marking system of Polynesian languages. Moreover, it implies an account of passivisation which is directly related to discourse function.

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1.2 Standard analysis

The standard analysis of passive formation can be briefly summarised as follows: A passive morpheme is attached to the verb, absorbing its Agent θ -role. According to Burzio's generalisation, the removal of an Agent θ -role implies the loss of a verb's ability to assign Object Case to its complement. Consequently, the complement is forced to move upwards to look for Case, which it finds in SpecIP, subject position. Thus the affixation of a passive morpheme leads to the deletion of the Agent of the clause and the promotion of the patient to subject of the clause. This analysis is empirically adequate for Western languages, but faces certain problems when applied to one class of languages, the Austronesian subject-focus languages spoken in Taiwan, the Philippines and Madagascar. It is to be noted that a crucial point of this analysis is that it predicts that passivisation necessarily entails a valency reduction, concerning both θ -roles and Case-assignment.

2 The Seediq evidence

2.1 Typological background

Seediq is an Austronesian language spoken by approximately 20 000 people in northern-central Taiwan. It is a member of the Atayalic subgroup of Formosan languages, and is typologically a subject-focus language. Subject-focus implies that the thematic role of the subject is reflected on the morphology of the verb. In this respect focus is similar to Western voice, with two important differences, both of which are crucial to our argument here:

a) whereas voice is bipolar (active/passive), the usual number of foci is either three or four. Seediq has a typical four-focus system: Actor Focus (AF: active), Patient Focus (PF: direct passive), Locative Focus (LF: locative passive) and Instrument Focus (IF: instrumental passive).

b) whereas (Western) passivisation implies a reduction in the valency of the verb, a passive focus has the same valency as its corresponding active (in fact, passivisation may in some cases serve to increase the valency of a verb, particularly using IF with a normal transitive verb, for examples see section 2.4).

2.2 GB analysis

Guilfoyle, Hung & Travis 1992 analyse similar data in Malagasy and three other Austronesian languages within a GB framework, claiming that it is the

focus morphology in itself that changes the Case-marking properties of the verb in such a way as to force movement to SpecIP from a certain position (which is Case-less in connection with certain focus morphology). The main points of their argument are outlined below (cf. Figure 1).

The AT (Actor-Topic, cf. our Actor Focus) prefix *an-* appears in V° and directly Case-marks the complement position within V' . The verb moves up to I° , but has no morphology which is capable of Case-marking SpecVP by Exceptional Case-Marking (henceforth ECM), so SpecVP remains a Case-less position, and the Agent must move to SpecIP to get Case, resulting in an active construction.

The TT (Theme-Topic, cf. our Patient Focus) suffix *-na* appears in I° and Case-marks SpecVP by ECM. It combines with a verb stem which has been base-generated in V° , without the AT affix, so the complement position within V' is not Case-marked. Therefore the patient must move to SpecIP to get Case, resulting in a passive construction.

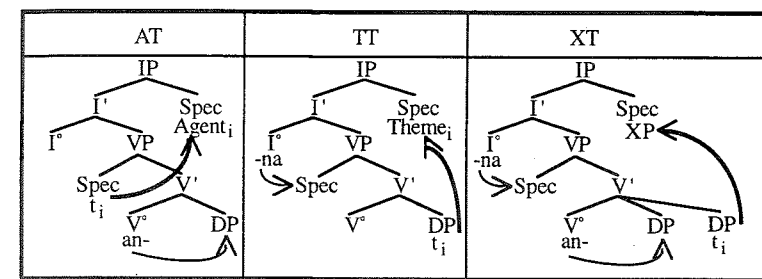


Figure 1. Focus in Malagasy (adapted from Guilfoyle, Hung & Travis 1992)

Malagasy has a third focus, termed by GHT XT (or Circumstantial Topic), which corresponds more or less to IF in Seediq. XT indicates that neither the agent nor the patient is clause subject, instead, that some other argument is. Interestingly enough, XT morphology in Malagasy coincides with a combination of AT and TT morphology, which makes this reasoning even more plausible. In XT, we have the AT prefix *an-* in V° which Case-marks the complement position. The verb raises to I° , where the TT suffix *-na* is already Case-marking SpecVP. Thus, both SpecVP and Object position are Case-marked, and some other argument moves there to get Case.

This analysis is brilliant in its simplicity and plausibility. It is not, however, necessarily applicable in its entirety to Austronesian subject-focus languages in general. As far as Seediq is concerned, it makes false

predictions when confronted with two-verb clauses. It is the assumption that focus in itself can affect the Case-marking with VP which does not work for Seediq.

In Seediq two-verb clauses, only the first verb has distinctive focus – the second verb (and any following verb) always has default AF morphology (1).

1. Yahun mekan qolic ka bunga.
 come PF eat AF rat Subj sweet potato
 'A rat will come and eat the sweet potatoes.'

Thus, a passive (PF) clause has one PF verb (in I°) and one AF verb (in V°).

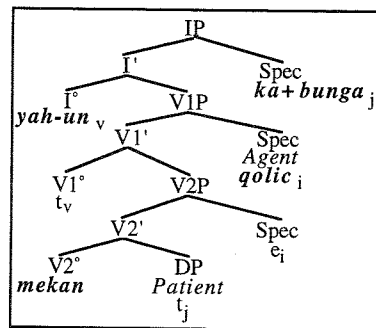


Figure 2. Two-verb PF clause in Seediq

The structural properties of such a clause are identical to those of an XT clause in Malagasy: an AF affix appearing in V° (on the lower verb) and a PF affix appearing in I° (on the higher verb). We recall that the AF affix in V° is expected to Case-mark its complement, as the case is in Malagasy. This would imply that a two-verb clause in Seediq is expected to behave in all respects as an XT clause in Malagasy, i.e. that both an Agent and a Patient are licensed within VP, and another argument appears in SpecIP. However, a two-verb passive clause in Seediq is just as passive as a one-verb passive clause: if we remove the verb /eyah/ 'to come', the clause would have the verb /ekan/ 'to eat'² in PF reflecting the same diathetic change (2).

²The morphological connection is not particularly clear because the verb 'to eat' has a suppletive root /puq/ used in suffixed environments.

2. Puqun qolic ka bunga.
 eat PF rat Subj sweet potato
 'A rat will eat the sweet potatoes.'

Thus, as far as Seediq is concerned, we can make the following generalisation: the only focus morphology which is relevant to the voice/focus of the clause is that which is visible in I°. It is doubtful if we can expect an element in I° to be able to affect Case-marking in the complement position within V' (especially if there are two VP's, one embedded within the other), so I claim that voice / focus cannot affect the Case-marking properties of VP. Our next problem is then what the function of voice is, and what it is that causes movement to SpecIP, if Case is not involved. We shall address the latter question first.

2.3 Functional account

My first claim is that movement to SpecIP takes place solely (or primarily) to ensure that every clause has a grammatical subject. We can formulate this as follows:

At s-structure, SpecIP must be filled (i.e. it must have a referent). This referent may be either overt or *pro*.

Notice that this has nothing to do with so-called pro-drop. 'Pro-drop' is not a case where subject position does not contain *pro*, it is a case where subject position contains only *pro* rather than an overt argument. Even in cases where there is no argument available at all (such as weather verbs), in pro-drop languages where a finite verb agrees in person and number with its subject, we will find weather verbs agreeing with a default person and number which reflects an arbitrary *pro* in SpecIP (usually 3sg).

Our claim is then that movement takes place to SpecIP because SpecIP must have a referent: something must, quite simply, move to SpecIP. Which element is chosen is simply a matter of discourse. The subject of a clause is the element which is the most prominent in the context. It is prototypically the most definite, referential or animate of the arguments of the clause, but not necessarily the agent.

In an unmarked case, where there are no great differences in prominence, we expect the highest argument to move to SpecIP – for the simple reason that the structural distance to SpecIP is the shortest for the highest argument. Such a construction we call an active (whether or not it is the agent of a transitive verb or the patient of an unaccusative verb which

moves). If an element other than the highest argument moves to SpecIP, we call this a passive construction.

We therefore define passivisation as follows:

- Passivisation is nothing other than diathetic change, i.e. a movement to SpecIP which is in a sense marked.
- Diathetic change is reflected by morphology on the verb. We call such morphology 'passive' morphology³.

Thus, passive morphology serves to identify the nature of the diathetic change which has taken place. In a sense, the passive morpheme agrees in thematic role⁴ with the element which has moved to subject position. We can term this relation 'θ-agreement' or 'thematic agreement', in analogy to person, number or gender agreement. Our choice of term is irrelevant.

Since we have noted that focus morphology in Seediq cannot affect Case-marking properties within VP, we must assume that both SpecVP and the complement position within V' must be Case-marked at d-structure. We can attribute this Case-marking to government as follows: [DP, V'] is Case-marked under government from V° and SpecVP is Case-marked under government from I°, regardless of the morphology actually found there. In this respect my analysis differs from that of GHT, since they attribute Case-marking in SpecVP to a certain type of morphology in I°, namely TT (or passive) morphology.

According to the interpretation presented here, it is clear why there is no difference in valency between an active and a passive in Seediq: no matter which element moves to SpecIP, the other is Case-marked in its base-generated position and may remain there. Therefore, both actives and passives are transitive in Seediq.

2.4 Instrumental focus and Case in SpecIP

Our next question concerns the status of SpecIP. Given that movement from a Case-marked position takes place to SpecIP, it would be natural to suppose that the latter is not Case-marked, i.e. that Case-marking is completed at d-structure, and that movement to SpecIP has no effects as far as Case is

³As far as Western languages are concerned – in subject-focus languages we often refer to different foci in this context. In syntactically ergative languages, as we shall see in section 4.3.2, the situation is in a sense a mirror image of that in Western languages.

⁴To be exact, passive does not indicate the θ-role as such, but rather the type of structural movement which has taken place: that movement to SpecIP has not taken place from the highest argument. However, in most cases this coincides rather neatly with thematic role.

concerned (we have already noted that movement takes place independently of Case-marking as such).

However, we do have evidence that SpecIP is in fact a Case-position in its own right (3).

3. Sqalang daha lmiqu ka dapa.
fence in IF 3p.g. forest Subj cow
'They fence in the forest for the cow.'

In example 3, the appearance of an IF verb in I° licenses an element in SpecIP which has no corresponding position within VP, as evident from the fact that the verb /qalang/ is normally monotransitive:

4. a. Qmalang lmiqu dheya.
fence in AF forest they
'They fence in (a section of) forest.'
- b. Qlangun daha lmiqu.
fence in PF 3.p.g forest
'They fence in the forest.'

Thus, both *lmiqu* 'forest' (in 4a) and *dheya/daha* 'they' (in 4b) can appear in VP, whereas *dapa* 'cow' (in 3) can not. Therefore, I suggest that SpecIP is a Case-marked position, since it can license an element which has no corresponding overt position within VP. It does not help to claim that SpecIP is only Case-marked by the IF affix *s-*, since IF can also be used to identify a subject which has been extracted from a particularly deeply embedded position, such as the patient of a causative (5a). In this case, the argument which is identified by IF can also appear within VP (5b, c).

5. a. Spiimah mu seediq sino kiya.
drink CAUS IF 1.s.g person wine that
'I shall invite someone to drink that wine.'
- b. Pnimah ku tikuh sino seediq.
drink CAUS AF PRET 1s.n a bit wine person
'I invited someone to drink some wine.'
- c. Pnmahan mu tikuh sino seediq kiya.
drink CAUS LF PRET 1s.g a bit wine person that
'I invited that person to drink some wine.'

At d-structure, all three arguments are Case-marked. In 5a, the *s-*prefix indicates that *sino* 'wine' has originated as the inner patient of a causative construction (where it is Case-marked by the verb /imah/ 'to drink'). In this

case, *sino* has clearly moved from a Case-position to SpecIP, which we in 3 claimed must be a Case-position (Case-marked by the *s*-affix in I').

Thus, we are forced to accept the concept of movement from a Case-position to another Case-position in one type of construction in Seediq. Let us explore the consequences of this idea. There are three possible alternative views relating to this set of facts:

- a) Seediq (or the IF construction in Seediq) is aberrant,
- b) in Seediq, movement appears to take place from a Case-position to another Case-position (although in actual fact it does not) or
- c) in other languages, movement appears not to take place from one Case-position to another Case-position (although in actual fact it does/may).

Alternative a) implies avoiding the issue entirely. As for alternative b), we have seen evidence above which appears to indicate that such movement actually does take place. Our purpose in this paper is therefore to explore the consequences of alternative c). To do this, we must first of all present the standard analysis of passivisation.

3 Consequences for the standard analysis

Within standard GB theory, movement to SpecIP (subject position) takes place for Case purposes, i.e. an argument which is not assigned Case at d-structure must either move to a Case-position during move- α or be deleted (an NP may not be realised phonetically unless it has Case). The result is a chain (normally termed an A-chain or argument chain) which consists of a phonetically realised argument in a Case-position and a trace in a θ -marked position. Such a chain has only one θ -role (that assigned at d-structure) and only one Case (that assigned after movement).

Passivisation is normally taken to be absorption (by the passive morpheme) of the Agent θ -role. This in turn entails disappearance of the Case-marking of the complement by the verb, leading to obligatory movement of the object to SpecIP to receive Case. The connection between absorption of the Agent θ -role and the inhibition of objective Case-marking is formulated in what is commonly known as Burzio's generalisation:

"A verb which lacks an external argument fails to assign accusative case. A verb which fails to assign accusative case fails to theta-mark an external argument." (Burzio 1986)

This is a descriptive statement. What it actually claims is exactly the following: In a clause where no overt Agent is present as a central argument of the verb, a patient will not appear in Object Case at s-structure. It is important to note that Burzio's generalisation actually explains nothing: it is the expression of a known fact, and does not follow logically from any other principle in GB grammar. It does not contain any inherent motivation. Therefore, to explain the disappearance of Object Case in passives in terms of Burzio's generalisation is really avoiding the question altogether.

4 A new approach

4.1 Functional passives

In this section, I shall present an account of passivisation which directly follows from what we have claimed about Seediq. To do this, we shall first examine the definition of Seediq passivisation in the light of examples from Western languages such as English. I claimed in section 2.3 that passivisation is nothing other than movement to SpecIP which is marked, and which takes place for discourse reasons.

It is a well-known fact that passive constructions are often chosen to promote the patient role in a clause. Expressed in simple terms, a passive makes a patient (or some other participant) subject not only of the clause, but also of the discourse. This is particularly evident in subject-focus languages such as Seediq, where appearance in subject position is a reliable clue that an argument is definite and/or referential, but it is also attested for languages such as English. For a native speaker of English, a definite and animate patient is a more typical clause subject than an indefinite and inanimate agent, as evidenced by the following examples:

6. a. The horse was struck by lightning.
- b. Lightning struck the horse.

In any normal discourse, 6a would be a more natural utterance than 6b. This, I claim, is because *the horse* is a more likely topic of discourse than *lightning*, especially when the former is definite.

Let us assume for argument's sake that our definition of passivisation is valid. Let us also assume that the correct alternative in section 2.4 is alternative c): "in other languages, movement appears not to take place from one Case-position to another Case-position (although in actual fact it does / may)". If we then accept the traditional view that SpecVP in a

language such as English is not a Case-position, we get the following analysis of passivisation.

If we base-generate the Agent in SpecVP and the Patient in [DP, V'], we have a situation where only one argument is Case-marked at d-structure: the Patient. SpecIP must be filled (must have a referent). In the unmarked case, the Agent moves to SpecIP and receives Case, and at s-structure, both arguments are Case-licensed. We call this an active construction.

ACTIVE: SpecVP	->	SpecIP	
θ		Case	1 θ , 1 Case
[DP, V']			
θ , Case			1 θ , 1 Case

If, on the other hand, we have discourse reasons for choosing the Patient to act as subject of the clause (i.e. subject of discourse), the following situation arises. The patient is Case-marked at d-structure, and moves up to SpecIP, taking its Case with it. The Nominative Case in SpecIP cancels out the Object Case carried by the Object. The Agent, on the other hand, is stranded in SpecVP, a position where it is not Case-marked. It may not be realised since it does not receive Case. Here, there are two alternative strategies: i) the Agent is deleted (resulting in an agent-less passive) or ii) the Agent receives Artificial Case-Marking (henceforth ACM) by a preposition (such an Agent PP is normally referred to as a 'by-phrase'). In effect, the cancellation of one Case by another has led to the automatic reduction in valency in a passive construction as opposed to the corresponding active.

PASSIVE: [DP, V']	->	SpecIP	
θ , Case		Case	1 θ , 2 (->1) Case
SpecVP			
θ			1 θ , \emptyset Case
			\emptyset / ACM

Assuming the single parametric difference between SpecVP being Case-marked in Austronesian languages and not Case-marked in Western languages, we get an automatic explanation why passive in Western languages entails a valency reduction, whereas passive in Austronesian subject-focus languages does not.

We also notice that this system makes no mention of Burzio's generalisation – nor is this needed in any way in our analysis. Diathetic change in a language where Burzio's generalisation holds (i.e. where

SpecVP is not Case-marked) implies in itself loss of one Case. The Agent can not receive Case, so it can not be realised phonetically unless in an ACM construction.

The model I have presented in the preceding pages expresses Burzio's generalisation automatically, as an unavoidable result of SpecVP not having Case, showing at the same time why Burzio's generalisation does not hold in subject-focus languages, where SpecVP is a Case-marked position.

4.2 Theoretical implications

There are three major points to be noted in which the analysis presented here differs from the traditional GB analysis of passivisation and movement in general. We shall return to these here, and discuss what they imply for the theory as a whole.

1) Movement to SpecIP is never for the purpose of receiving Case. Movement to SpecIP is always dictated by the fact that SpecIP must have a referent, and the choice as to which argument moves to SpecIP is dictated entirely by a) shortness of movement and b) discourse.

2) Chains can have two Cases. Movement from one Case-position to another implies that the d-Case of an argument is cancelled and replaced by the s-Case assigned in SpecIP. The whole principle is based on and requires the concept of Case-cancellation in SpecIP. We have seen clear indications that it occurs in Seediq. Therefore, we can not rule it out a priori in any other language.

With respect to point 2) above, there are two comments which should be made:

i) The concept of two-Case chains is excluded if one claims that movement to SpecIP takes place for Case reasons. Obviously, a Case-marked argument need not move to SpecIP to get Case, and if movement only takes place for Case-reasons, no Case-marked argument would ever move to a Case-position. The two ideas are inextricably connected: once we accept movement to SpecIP for discourse reasons, there is no theoretical reason to assume that a chain may not be doubly Case-marked.

ii) There is no empirical reason to assume that chains can not be doubly Case-marked. Rather, if we forbid double Case-marking of chains a priori, we cannot explain Burzio's generalisation in any obvious way.

3) What is the real difference between different kinds of chains? According to the standard analysis, there are two kinds of chain:

A-chain: from a θ -position to a Case-position
(reflects movement to receive Case)

A'-chain: from a Case-position to a non-Case-position
(usually for extraction, discourse-related topicalisation etc)

In our account, there is no theoretical difference between A-chains and A'-chains, except the obvious difference that they reflect movement to different positions. If our analysis is correct, both A-chains and A'-chains reflect different types of extraction: A-chains reflect extraction from VP to SpecIP to satisfy the fact that SpecIP must have a referent, and A'-chains reflect extraction from IP to SpecCP or outside the clause to satisfy some other requirement at a higher level. In either case, the movement in itself is not related to Case.

4.3 Parametric variation

We have discussed passivisation in terms of parametric variation of the Case-marking of SpecVP by I°. It is conceivable that the Case-marking of [DP, V'] by V° is also subject to parametric variation. We shall in the following sections examine the possible consequences of such a view.

4.3.1 Polynesian languages

We shall propose a hypothetical set of languages where:

I° can *not* Case-mark SpecVP and V° can *not* Case-mark [DP, V']

We reconstruct what the properties of such a set of languages might be. Again, we assume that movement to SpecIP takes place for discourse reasons. In the first case, the Agent moves to SpecIP, and receives Case there. The Patient is stranded in [DP, V'] and cannot receive Case. It is therefore either deleted or receives Case by ACM within a PP.

ACTIVE: SpecVP	->	SpecIP	
θ		Case	1 θ , 1 Case
[DP, V']			
θ			1 θ , \emptyset Case => ACM

Conversely, if the Patient moves to SpecIP, it receives Case there and is licensed. The Agent, on the other hand, is stranded in SpecVP where it may not receive Case, so it is either deleted or receives Case by ACM in a PP.

PASSIVE: [DP, V']	->	SpecIP	
θ		Case	1 θ , 1 Case
SpecVP			
θ			1 θ , \emptyset Case => ACM

This type of system does exist. It is that which occurs in Polynesian languages such as Maori, cf. Bauer 1993. In active clauses, the patient must be artificially Case-marked by the preposition *i* (7a), in passive clauses, the agent must be artificially Case-marked by the preposition *e* 'by' (7b).

7. a. E koohete ana a Huia i a Pani.
T/A scold PROG PRT PN Prep PRT PN
'Huia is scolding Pani.'
- b. I koohete-ia a Pani e Huia.
T/A scold-PASS PRT PN by PN
'Pani was scolded by Huia.'

We see that since neither SpecVP nor [DP, V'] are Case-marked positions, choice of either Agent or Patient as subject has no effect on the valency of the clause. In either case, only one argument appears in a Case-marked position, namely the subject. The other argument must be artificially Case-marked.

This implies that Polynesian languages and subject-focus languages differ in that all non-subject arguments require ACM in Polynesian, whereas no arguments require ACM in subject-focus languages. In a sense, therefore, this implies a greater parametric difference between Polynesian and subject-focus Austronesian than between either of these groups and English (we recall that English differs in only one parameter from either of the other groups, being like Polynesian in that SpecVP is not Case-marked and like Seediq in that [DP, V'] is). However, the common Austronesian trait appears to be that there is no asymmetry between SpecVP and [DP, V']. Either both are Case-marked or neither.

4.3.2 Syntactic ergativity

In this section, we shall examine the properties of a language type in which:

I° Case-marks SpecVP, V° does *not* Case-mark [DP, V']

Let us consider a situation where a patient is chosen as subject of the clause. It moves to SpecIP from a Case-less position to a Case-position and is licensed there. The agent remains in SpecVP and is Case-marked there by I°. Such a clause is similar to a PF clause in Seediq. If the patient is subject, the clause is transitive.

“PASSIVE”:	[DP, V']	->	SpecIP	
	θ		Case	1 θ, 1 Case
	SpecVP			
	θ, Case			1 θ, 1 Case

If, on the other hand, the agent is chosen as clause subject, it moves from a Case-marked position to a Case-marked position. The d-Case of the agent is cancelled out by the s-Case of subject position. The patient is stranded in [DP, V'] where it cannot get Case and is either deleted or artificially Case-marked.

“ACTIVE”:	SpecVP	->	SpecIP	
	θ		Case	1 θ, 1 Case
	[DP, V']			
	θ			1 θ, ∅ Case
				=> ACM / deleted

In such a language, it is the “active” construction which has the lower valency. Given the normal usage of the word “passive” to indicate a diathetic change which usually involves a valency reduction, the terms ‘active’ and ‘passive’ are, if not misleading, at least not fully appropriate in this context. Instead, we defer to the term used by most researchers of such languages and call the ‘passive’ construction *ergative*, and the ‘active’ construction *anti-passive*. After all, this is exactly what we are dealing with. Languages where SpecVP is Case-marked but [DP, V'] is not are the type usually referred to as syntactically ergative languages. Probably the most publicised example is Dyirbal (cf. Dixon 1994 for more examples). In such languages, it is the patient which is subject in a normal transitive clause, as evidenced by the fact that it is the patient which is automatically coreferent with a deleted subject in a following intransitive clause (8).

8. *ɲuma yabu-ŋgu bura-n banaga-nʷu*
 father-ABS mother-ERG see-NON.FUT return-NON.FUT
 ‘Mother saw father and he (*she) returned.’
 (‘Father was seen by mother and returned.’)

If we wish to corefer the agent of a transitive clause with a deleted subject in a transitive clause, this is done by using the anti-passive construction (9).

9. *ɲuma bural-ŋa-nʷu yabu-gu banaga-nʷu*
 father-ABS see-ANTIPASS-NON.FUT mother-DAT return-NON.FUT
 ‘Father saw mother and (he) returned.’

It is to be noted that this description of ergativity holds for syntactically ergative languages. It does not include morphologically ergative languages such as Basque, which are traditionally described as having ergative morphology but accusative syntax (Eguzkitza 1987). Morphological ergativity is a more complex system, which, for reasons of space, I shall not address in this paper⁵.

5 Summary

In the preceding sections, we have seen how the independent interaction of two Case parameters (“[DP, V'] is / is not Case marked” and “SpecVP is / is not Case-marked”) can account for four different types of language where the active / passive dichotomy has radically different properties. The four language types are summarised below, with example languages, together with the term normally used to describe the language type :

<i>SpecVP</i>	[DP, V']	<i>example</i>	<i>type</i>
-Case	+Case	English, Swedish	accusative
+Case	+Case	Seediq	subject-focus
-Case	-Case	Maori	(no accepted term)
+Case	-Case	Dyirbal	syntactically ergative

This model explains the varying properties of different types of voice in the different languages, accounting for constructions such as active, passive, actor focus, patient focus, ergative and anti-passive as simple consequences of the relevant parameters for each language and a choice of clause subject which is entirely based on discourse function: for an argument to be chosen as subject, it should prototypically have one or more of the following features: a) it should be topic of discourse; b) it should be definite; c) it should be animate; d) it should be Case-less at d-structure.

Condition d) is only relevant to languages which have some kind of asymmetry in the Case-marking system in VP, and is simply a measure of

⁵For an analysis of several morphologically ergative languages see Bobaljik 1993.

efficiency: if no argument has a discourse-related priority to be chosen as subject, greater transitivity is achieved by allowing the argument which requires Case to be Case-licensed in SpecIP. This in turn explains why active clauses are considered to be basic in Western languages, while passive is treated as a derived form, whereas ergative clauses are basic in Dyirbal (incidentally the reason why the term 'passive' is not used for such constructions) and anti-passive (which corresponds to, but is never referred to as, 'active') is derived. A correlate of this is that movement which does not obey condition d) is usually reflected in the verb with a more marked form: passive in accusative languages, anti-passive in ergative languages.

This analysis requires a major revision of the sections of GB theory which deal with Case-marking. The relevant points are summarised below:

- (a) movement to subject position takes place in order that SpecIP have a referent.
- (b) choice of which argument is to move to SpecIP is dictated by discourse.
- (c) movement may take place from one Case-position to another.

If we accept points (a) - (c), we have a model of diathetic change which entirely eliminates Burzio's generalisation and which accounts for the differences between subject-focus languages, accusative languages and ergative languages in terms of two parameters.

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Construction as reduction

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The language acquisition process is suggested to be a process of selection and cumulative reduction from the language of more experienced (i.e. older) individuals. The population structure ensures that the approximation of the language learner results in a common language that is stable under normal conditions. Language is described as a 'stasis' between constructive and eliminative reduction.

Introduction

The language acquisition process is often conceived of as the construction of a mental program for the generation of syntactically correct phrases by some kind of agent – the language learner.

An alternative conception of the acquisition process is to view it as a process of selection from the language, which can be described as setting parameters (cf. Piatelli-Palmarini 1989). The language learner is the selecting environment of the language, in analogy with environmental factors shaping biological life (Dawkins 1976; Johansson 1995b).

An evolutionary process is a selective reduction, in this case from the language as it exists at the time. The language is preserved by human inertia. We tend to do what others do, which is a very good strategy in a complex world of billions of possibilities that can all potentially be actualised. Another feature of such an evolutionary process is that it is accumulative at the same time as it is eliminative (cf. Ramsey 1995). Individuals of a population make reductions from local experience, and can therefore not do exactly the same reductions.

While the language learners are picking up reduced versions of the language, the language is still out there in the rest of the population that has acquired the language. Irrespective of what children (L1 learners) do, in the normal case they will not affect the language because they cannot influence enough people. Adults simply do not regress to childlike language.

L2-learners are, in most historical cases, isolated from the main population socially as well as geographically, which might lead to new local variants. For L2-learners to affect the language of the population they would have to be socially and geographically integrated with the population.