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## ANIMACY AND MARKEDNESS IN UNIVERSAL GRAMMAR

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Due to the interaction of lexical and grammatical semantics, there are many languages which show a split in the marking of grammatical categories according to the animacy hierarchy. Split ergativity of the well-known Dyirbal type is a case in point. This type of split can be shown to be a combination of 'differential subject marking' (DSM) with 'differential object marking' (DOM). Empirical research in the domain of Australian, Austronesian, and Sino-Tibetan languages leads to the conclusion that DSM never occurs in isolation, i.e. without DOM, whereas DOM may well stand alone, and indeed does so very frequently. Markedness splits based on animacy are not distributed symmetrically. DOM is 'dominant', DSM is 'recessive'.

My principal aim with this contribution is to provide empirical evidence for two claims which I am not the first to make, but which I think have not yet received the attention they merit. The first claim deals with substance, the second with methodology. Ultimately, they are closely related.

1) Grammatical relations may, but need not, be independent of the semantic nature of the lexical items to which they refer. In fact, such fundamental relations as "subject" and "object"<sup>1</sup> are by no means merely syntactic or formal devices; in essence they are semantic. The difference between grammatical and lexical meaning is a matter of degree. Grammatical morphemes are more general, more vague, and more abstract than their lexical counterparts, but they are not essentially different. Therefore, it is not astonishing that grammatical and lexical meanings may interact. To cite just one example: Given the lexical content of such Latin words as *dominus* and *mensa* on the one hand, and the grammatical meaning of the vocative case on the other, it seems likely that the form *domine* will occur significantly more frequently than *mensa* (voc.), except, of course, in traditional school grammar, which is probably

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<sup>1</sup> These traditional terms will be used here in the sense of (transitive) 'agent' and 'patient', respectively. In the following diagrams, A means 'agent' and Z means 'patient'; indices refer to verbal valency ( $X_1$  is an argument of a monovalent (intransitive) verb,  $X_2$  depends on a bivalent (transitive) one). With monovalent verbs, the opposition A vs. Z is usually neutralized, at least in accusative and ergative systems; hence the notation  $A_1/Z_1$ . For further details see Bossong 1980 a.

the only place on earth where tables and the like are addressed. This example, as trivial as it might seem, shows us two important facts. First, the interaction of grammatical and lexical semantics manifests itself primarily in the form of frequency distributions; and second, such frequency distributions may subsequently give rise to the formation of morphological categories: Only in the masculine singular does the Latin noun exhibit a formally distinct vocative ending. This leads to the second claim.

2) In universals research, and especially in what may be labelled *markedness theory*, implications, implicational chains and hierarchies have proved highly valuable for describing broad ranges of facts in a unified manner. I claim that some, or most of these, powerful descriptive tools depend ultimately on frequency distributions. The base of implicational universals is probabilistic; and inversely, probabilistic or statistical regularities can be reformulated as implications or implicational chains.

Among the semantic properties acting upon the formation of morphological categories, animacy undoubtedly plays a dominant role. In what follows, I concentrate upon one aspect of this highly complex matter: The relation between *differential object marking* and *split ergativity* of the well-known Dyirbal type. It is evident that somehow or other animacy is involved in both these phenomena, but their exact relationship has not yet been determined.

I have termed *differential object marking* (DOM)<sup>2</sup> the subcategorization of direct objects, or, more precisely, of transitive patients ( $Z_2$ ), depending on the semantic properties of the object noun phrase. This phenomenon is fairly widespread. Up to now, I have found it in at least 250 languages in all continents and throughout most of the great genetic stocks. There are essentially two kinds of semantic properties that underlie the differentiation of objects. On the one hand, there are *inherent* features which are independent of the context and which correspond roughly to what is generally called animacy. On the other hand, there are *referential* features which vary as a function of the syntagmatic and pragmatic environment. Since the concern here is exclusively with inherent features, suffice it to say that referential differentiation of objects acts primarily on a dichotomy of definite and indefinite. Among the languages with DOM, differentiation according to referential features alone is clearly predominant. Nevertheless, the languages with DOM partly or exclusively based on animacy are still numerous. To cite but a few major genetic groups, they occur in Romanian, Slavonic, and Indo-Aryan as well as in Sino-Tibetan, Bantu, Austronesian, Pama-Nyungan, and Tupi-Guarani.

Formally and semantically, DOM displays a wide array of variation. There are, however, certain basic principles underlying this variety of surface structures. With respect to these principles, it seems profitable to put forward two hypothetical universals. One of them has the form of a simple implication, the other shows the hierarchical structure of an implicational chain. The simple implication will be dealt with first. It can be formulated as follows:

$$(1) \quad \Delta(\pm M_X) \supset \Delta(\pm M_{Z_2})$$

<sup>2</sup> The following brief survey is based upon Bossong, in prep. See also Bossong 1982 b, 1985 a, 1985 b; Comrie 1979 and 1981, esp. chapters 6 and 9; Lazard 1984.

This means that differential marking [ $\Delta (\pm M)$ ] occurs more easily and more frequently with transitive patients [Z2] than with any other case function [X]. The example of the transitive agent (X = A2) is of special interest for the purpose of the present discussion:

$$(2) \quad \Delta (\pm M_{A2}) \supset \Delta (\pm M_{Z2})$$

In other words, differential subject marking (DSM) can only occur in combination with differential object marking, whereas the latter may very well stand alone within a given linguistic system. Metaphorically we might say that differential object marking is a dominant linguistic type whereas differential subject marking is recessive.

The implicational chain just mentioned allows predictions about the distribution of marked and unmarked terms within privative morphological oppositions<sup>3</sup>. It can be formulated as follows:

$$(3) \quad \text{If } \Delta (\pm M_{Z2}), \text{ then } (+M_{Z2}):$$

$$\text{concr} \supset \text{discr} \supset \text{anim} \supset \text{pers} \supset \text{hum} \supset \text{propr} \supset \text{deix}$$

This is a somewhat modified form of what is known in linguistics as the Silverstein Hierarchy<sup>4</sup>. It would be more appropriate to call it the *dimension of inherence* rather than the *animacy scale* since animacy is only one, although perhaps the most important, of the semantic distinctions involved. But the name is there, so I shall use it.

If read from left to right, this implicational chain is as trivial as logical: Of course it is true that, if every concrete object noun is positively marked, then discrete (countable) object nouns are so, too, since discrete entities form a subclass of the concrete ones; etc. But the point to be stressed is the non-reversibility of the implicational relations. If, for example, human object nouns are obligatorily marked, object nouns denoting personified animals need not be so. In this way, the implicational hierarchy (3) determines the potential turning-off points which separate zero-marking of objects (always towards the left side of the scale) from positive marking (always towards the right side) in a given language. There is differential marking if such a turning-off point falls within the scale. The marking is not differential if this hypothetical point coincides with the positive or the negative pole of it<sup>5</sup>.

These universal laws, to which I have not yet found any clear counter-example, are based upon a deeply rooted probabilistic regularity. I propose the following tentative formulation of this regularity:

<sup>3</sup> For the sake of clarity it must be stressed that the terms 'marked' vs. 'unmarked' are used here in a strictly morphological sense. To speak of markedness relations only makes sense if the opposition is privative ("zero vs. something"), but not if it is equipollent ("something vs. something else"). I thank Theo Vennemann for having insisted upon this point.

<sup>4</sup> As it was first expounded in Silverstein 1976.

<sup>5</sup> The idea of scaled dimensions with 'focal instances' and a 'turning-off point' has been elaborated mainly by Seiler and his collaborators. See for example Seiler 1983, Seiler & Lehmann 1982, Hohenstein 1980, Mosel 1982.

(4)

	deix	propr	hum	pers	anim	discr	concr	
+M <sub>Z2</sub>	>							dominant
+M <sub>A2</sub>	<							recessive

{Here, > denotes increasing probability of zero-marking, and < increasing probability of positive marking}.

The upper part of (4) accounts for the markedness law of DOM, as it was expounded in (3). The features *dominant* vs. *recessive* account for the implicational universal (2); The lower part of (4) plays a role in the grammatical structure of a given language only if the upper part does so as well. Differential marking is far more frequent with objects than with subjects.

Let us now turn to the relation between DOM and split ergativity of the Dyirbal type, the main empirical issue under discussion here<sup>6</sup>.

As is well known, in many Australian languages the declension of the noun follows an ergative pattern, whereas pronominal forms are accusatively structured. This means that there is a split dividing nominals at one of the potential cut-off point of the inherence scale, namely [ $\pm$ deix]. Apart from the often adduced examples of Dyirbal and Yidiny<sup>7</sup>, Guugu Yimidhirr<sup>8</sup> provides a prototypical instance of this configuration. Consider the following diagram:

(5) *Guugu Yimidhirr* (P.-N./N.-W. Qld.)

	+deix	-deix	
A <sub>1</sub> /Z <sub>1</sub>	<i>ɖana</i>	<i>gabiirr</i>	
A <sub>2</sub>	<i>ɖana</i>	<i>gabiirr.ɲun</i>	+ Δ
Z <sub>2</sub>	<i>ɖana.ɲan</i>	<i>gabiirr</i>	+ Δ
	"they"	"girl"	

This schematical representation clearly shows the essential pattern of split ergativity. On the one hand, there is undoubtedly a differentiation of transitive patients accord-

<sup>6</sup> Note that in the following discussion nothing will be said about 'deep' or 'syntactic' ergativity. The concern is exclusively with morphological patterns, i.e. with straightforward 'surface' phenomena. Elements for a discussion of 'deeper' levels of ergativity can be found in Bossong 1980 b, 1982 a.

<sup>7</sup> Both languages have been thoroughly described by Dixon (1972 and 1977).

<sup>8</sup> The analysis of Guugu Yimidhirr is based on Haviland 1979.

ing to their inherent lexical meaning, just as in so many other languages with DOM. A similar cut-off point [ $\pm$ deix] can be found, for example, in modern written Catalan or in Brazilian Portuguese; in these two Romance languages, the formerly far more widespread use of the preposition *a* with the direct object has been reduced to the absolute minimum (the free pronoun). On the other hand, the structure of Guugu Yimidhirr is marked off against the more current pattern of DOM by the additional presence of DSM: According to (4), the probability of positive subject marking increases proportionally as the noun phrase is lower in the animacy hierarchy. The opposition of marked vs. unmarked transitive agent is the distinctive feature of split ergativity. The fact that such a split in the subject paradigm does not occur in isolation, but is accompanied by an inverted split in the object paradigm, confirms the validity of hypothesis (2). What occurs in languages with split ergativity of the Dyrbal type, is a combination of DOM with DSM. Moreover, if this hypothesis is correct, then split ergativity of this type can only originate in languages which have previously developed some DOM.

As already pointed out by Silverstein, the turning-off points of the subject and the object split do not necessarily coincide, as was the case in Guugu Yimidhirr. A prototypical instance of double split is provided by Yuulngu<sup>9</sup>. Consider the following diagram:

(6) *Yuulngu* (P.-N./N.T.)

	+deix	-deix^+anim	-anim	
A <sub>1</sub> /Z <sub>1</sub>	<i>ḡan</i>	<i>yūḡu</i>	<i>wilmùr</i>	
A <sub>2</sub>	<i>ḡan</i>	<i>yūḡu.tu</i>	<i>wilmùr.tu</i>	+ Δ
Z <sub>2</sub>	<i>ḡan.ḡa</i>	<i>yūḡu.ḡa</i>	<i>wilmùr</i>	+ Δ
	“he”	“man”	“spear”	

The split in the subject paradigm corresponds exactly to the most widespread pattern in Australian languages, whereas the cut-off point of the object paradigm is located at the animate-inanimate border, which occurs very frequently in languages with DOM. As a result, positive marking of transitive agents and patients occurs side by side within a given semantic zone, thus yielding a tripartite marking subsystem characteristic of quite a number of ergative languages.

Gumbaynggir<sup>10</sup> provides a more complex and somewhat less typical example of double split. Its structure can be schematized as follows:

<sup>9</sup> The Yuulngu data come from Schebeck 1976 a; see also 1976 b.

<sup>10</sup> The data base for Gumbaynggir is Eades 1979; see also Tchekhoff 1979.

(7) *Gumbaynggir* (P.-N./N.S.W.)

	+deix <sub>1</sub>	+deix <sub>2</sub>	+propr	-propr	
A <sub>1</sub> /Z <sub>1</sub>	ŋinda	ŋūd <sup>v</sup> awin <sup>v</sup>	<i>birugan.ba</i>	<i>nīgar</i>	
A <sub>2</sub>	ŋinda	ŋūd <sup>v</sup> ali.n <sup>v</sup> d <sup>v</sup> u	<i>birugan.du</i>	<i>nīgar.du</i>	+ Δ
Z <sub>2</sub>	ŋina	ŋūd <sup>v</sup> ali.n <sup>v</sup> a	<i>birugan.a</i>	<i>nīgar</i>	+ Δ
	“thou”	“ye”	“Birugan”	“man”	

Let us first comment the semantic classes.

1) The class [+deix] is subdivided into two subclasses, the semantic motivation of which is not at all obvious: [+deix<sub>1</sub>] comprises 2nd sg as well as 1st dual incl and excl; all the rest is [+deix<sub>2</sub>] (1st sg, 2nd dual and pl, 1st pl incl and excl). Silverstein does not seem quite convincing when he places [+tu] above [+ego] in the animacy hierarchy, even though *Gumbaynggir* apparently provides some support for this claim. On the other hand, even if Silverstein's theory is accepted, it leaves unexplained the fact that 1st dual ranks higher than 2nd dual. I suppose that there is no deeper reason for this aberrant distribution and that the split between [+deix<sub>1</sub>] and [+deix<sub>2</sub>] is fortuitous. It should be regarded as an idiosyncrasy of *Gumbaynggir*, without any consequence for the general theory. Be that as it may, the crucial point for the discussion here lies in the fact that there is some split in the subject paradigm, and that it is located at the [+deix]-end of the hierarchy (3). As has been mentioned, DOM is dominant and DSM recessive: the traces of a subject split are as slight as one could imagine, whereas the object split is clear-cut and positive marking is fairly well developed.

2) The class which has been subsumed under the heading [+propr] is constituted, apart from proper nouns, mainly by kinship terms. Such terms frequently form a sort of transition between proper names in a strict sense and human nouns in general. But in *Gumbaynggir* the identification of kinship terms with proper names is justified for an additional reason: Terms of address and personal names are seldom used; they are frequently replaced by kinship terms which function in these cases as logical proper names.

We now come to the formal problems raised in connection with diagram (7).

1) As can immediately be seen, the morphological oppositions between pronominal case forms are equipollent, and not privative. Although in the examples already cited such oppositions have not yet occurred, it is obvious that this pattern is so frequent in Australian languages (and elsewhere) that it can be considered normal. As a thumb-rule one might say that oppositions are predominantly equipollent in the singular and predominantly privative in the non-singular numbers.

2) The special suffix for the intransitive subject function of proper names and kinship terms seems strange. It looks as if there was a quite unnatural split in the intransitive subject paradigm between the class [+propr] and all the rest. Since such a split would be typologically unique, it seems more plausible to look for another

explanation. I think this suffix (*-ba* or *-ga* in allomorphic variation) serves to adjust the paradigm of the [+propr] -class to the model of the deictic pronouns with which it forms a single category. The pronominal oppositions are of the equipollent type. A privative opposition within the [+propr] -class would not fit into this pattern, so *-ba/-ga* serves as a kind of morphological equalizer. Note that unsuffixed forms never occur in running text, apart from one isolated instance in a song (where metrical considerations can play a decisive role). I propose to consider *biruganba* as the basic form of the lexicon item *birugan*, in the same way as *yaya* is the basic form of an hypothetical lexical item meaning "I" without case marking.

Still another variation of this theme is offered by Warluwara<sup>11</sup> and the closely related Bularnu. Here a structure is found that goes beyond the schematic representation used so far:

(8) *Warluwara* (P.-N./W. Qld.)

	+deix	-deix <sup>^</sup> +def	-deix <sup>^</sup> -def	
A <sub>1</sub> /Z <sub>1</sub>	<i>wula</i>	<i>wada</i>	<i>wada</i>	
A <sub>2</sub>	<i>wula</i>	<i>wada.gu</i>	<i>wada.gu</i>	+ Δ
Z <sub>2</sub>	<i>wula.na</i>	<i>wada.na</i>	<i>wada</i>	+ Δ
	"they (dual)"	"stone"	"id."	

Although the remarks made by Breen (1976), which is for the moment the only available source, are not at all conclusive, the distinction made above of [ $\pm$ def] seems to account for most instances of marked and unmarked accusatives that are found in his examples. If this interpretation is essentially correct (more detailed research would undoubtedly make some refinements necessary, but this would not affect the argument), this would mean that objects can be differentiated according to referentiality instead of animacy even in a system with split ergativity. In other words, animacy-based differentiation of subjects may combine with referentiality-based differentiation of objects within one and the same individual language.

Although the combination of DOM with DSM is fairly common in Australian, and especially in Pama-Nyungan languages, there are, of course, some languages where DOM occurs alone, or where no differentiation at all is made.

The Duungidjawa dialect of the Waga-Waga language<sup>12</sup> is a particularly clear instance of the former type. Consider the following diagram:

<sup>11</sup> Warluwara und Bularnu are described in Breen 1976 a.

<sup>12</sup> An excellent account of Duungidjawa is found in Wurm 1976.

(9) *Duungidjawan* (← Waga-Waga) (P.-N./S.E. Qld.)

	+deix	+pers	-pers	
A <sub>1</sub> /Z <sub>1</sub>	ηai	bugin <sup>v</sup>	gorōman	
A <sub>2</sub>	ηa.d <sup>v</sup> u	bugin <sup>v</sup> .du	gorōman.du	- Δ
Z <sub>2</sub>	ηa.n <sup>v</sup> a	bugin <sup>v</sup> .na	gorōman	+ Δ
	“I”	“dog”	“kangaroo”	

The case of *Duungidjawan* is remarkable in several respects. First, it represents the rather rare type of a language with DOM within a consistently ergative system (i.e. a system where the ergative is marked without any split). The only parallel cases that have come to my attention are recorded for the Sino-Tibetan language family in Nepal (see below). Second, the cut-off point seems to be located at the [+pers] boundary. It is a rather frequent feature that the class of animals ([-hum] [+anim]) is split into two subclasses according to the “person-ness” of the animal in question. Evidently, horses have more such “person-ness” than ants or flies, but there may be intermediate cases where the usage varies according to the context. Similar cases can be found in Spanish, Hindi, Guaraní (and many others)<sup>13</sup>. Since Spanish belongs to the accusative and Guaraní to the active type, whereas Hindi and *Duungidjawan* are ergative in different degrees, it seems permitted to conclude that such semantic phenomena as semantic splits between different classes of animals are totally unrelated to basic syntactic typologies. Third, the example shows once more that DOM in a consistently ergative system necessarily leads to an opposition of a bipartite and a tripartite case-marking subsystem<sup>14</sup>.

The type without any differentiation whatsoever may be exemplified in Australia by languages like *Pitta-Pitta* (*Bidha-Bidha*) or the closely related *Wangkumara*<sup>15</sup>. Consider the following diagram:

(10) *Pitta-Pitta* (P.-N./W. Qld.)

	+deix	-deix	
A <sub>1</sub> /Z <sub>1</sub>	ηan <sup>v</sup> r <sup>v</sup> a	kaṭi	
A <sub>2</sub>	ηa.tu	kaṭi.lu	- Δ
Z <sub>2</sub>	ηa.n <sup>v</sup> a	kaṭi.ṅa	- Δ
	“I”	“snake”	

<sup>13</sup> Spanish and Hindi are generally known. The Guaraní case is discussed in some detail in Bossong 1983.

<sup>14</sup> This problem, too, has been dealt with in Bossong 1983. Compare also Bossong 1980 a.

<sup>15</sup> A detailed description of *Pitta-Pitta* is found in Blake 1979. For *Wangkumara* see Breen 1976 b.



Here is another example of the current pattern where the intransitive subject case, although unmarked in the noun, is marked in the pronoun, thus yielding an equipollent, and not a privative opposition. However, there is no reason to consider the intransitive subject paradigm as differential: *nan<sup>3</sup>t<sup>3</sup>a* is as unanalyzable a form as *ka-ti*. The essential point is not the nature of the oppositions (equipollent vs. privative), but the identity or non-identity of morphological categories.

Pitta-Pitta is remarkable insofar as it seems to exhibit a tripartite case-marking system throughout, thus resembling the often cited case of Motu. However, there is another split according to tense (in the future the system is bipartite!), which has been disregarded here because it has nothing to do with animacy. Pitta-Pitta, therefore, is not a counter-example to the claim made in an earlier paper, namely that tripartite case-marking never characterizes a language system as a whole<sup>16</sup>.

Up to now, a handful of representative examples have been analyzed which all confirm the basic assumption (2): Split ergativity of the Australian type necessarily co-occurs with DOM. Since prototypically *o n l y* noun inflexion is ergative and *o n l y* pronoun inflexion accusative, an accusative split is the necessary counterpart of the ergative split. Although the name of the latter has been taken for the whole phenomenon, it is strictly speaking only half of the picture. Nowhere is the implication (2) violated. There are many Australian languages with both differentiated subjects and objects, and a few with only differentiated objects or without any differentiation at all. Is there any counter-example, i.e. a language showing a split ergative without DOM?

According to the survey given by Blake (1977), only the non-Pama-Nyungan language Alawa seems to be a possible candidate for such an exception to universal (2). However, I think the structure of this language as analyzed by Blake (noun: erg; pronoun:  $\emptyset$ ) is an oversimplification. Apart from verbal morphology (which surely will have to be taken into consideration in a more complete account), there is a special pronominal inflexion, which is called 'indirect pronoun' by Sharpe<sup>17</sup>. It serves, among other things, to mark transitive patients, i.e. the accusative. Only if emphasis is intended can such an 'indirect pronoun' be replaced by its 'direct' counterpart. In other words, without emphasis, we have nominative vs. accusative pronouns (as opposed to absolutive vs. ergative nouns), a pattern that fits perfectly into the general structure of Australian languages. Only if emphasis is added may accusative pronouns be replaced by nominative ones. The examples given by Sharpe show clearly that 'emphasis' in this case means 'topicalization (of the object pronoun)'. It is well-known that in many languages, topicalized constituents appear in a basic form regardless of their case function (compare the often cited 'nominativus pendens' of Classical Arabic). The use of the 'direct' form for topicalized pronouns in Alawa is attributable to this universal tendency. This by no means alters the structure of the language which clearly has an accusatively patterned case-marking system in the

<sup>16</sup> See note 14 above.

<sup>17</sup> For Alawa, see Sharpe 1976.

pronoun, and in the pronoun only. Consequently, there is differential object marking. Universal (2) is not violated. Disregarding emphasis, we might represent the structure of Alawa as follows:

(11) *Alawa* (Maran/N.T.)

	+deix	-deix	
A <sub>1</sub> /Z <sub>1</sub>	<i>wulu</i>	<i>lilmi</i>	
A <sub>1</sub>	<i>wulu</i>	<i>lilmi.ři</i>	+ Δ
Z <sub>1</sub>	<i>wulu.ŋa</i>	<i>lilmi</i>	+ Δ
	“you”	“man”	

With Alawa, we have gone beyond the Pama-Nyungan family to which all the other languages discussed so far belong. We shall now turn to split ergativity outside Australia.

First, it must be stressed that the phenomenon is uncommon in other parts of the world. It has been difficult to discover the same combination of features in case-marking systems as those reported in some length here for Australian languages. Here are the results of my research up to now in this question.

Tongan is a clear instance of what is being sought. Its basic structure can be summarized as follows:

(12) *Tongan* (Austronesian)

	+deix	-deix	
A <sub>1</sub> /Z <sub>1</sub>	<i>ke</i>	<i>'a.fefine</i>	
A <sub>2</sub>	<i>ke</i>	<i>'e.fefine</i>	+ Δ
Z <sub>2</sub>	<i>koe</i>	<i>'a.fefine</i>	+ Δ
	“thou”	“woman”	

Apart from the fact that the morphological opposition is equipollent not only in the pronoun, but also in the noun, this diagram is exactly parallel to what we have seen in Australian languages. Note that in Tongan, as is generally the case in Austronesian languages, morphology is prefixal<sup>18</sup> (contrary to Pama-Nyungan). This

<sup>18</sup> Some Austronesian languages spoken in New Guinea are exceptions to this rule. See Capell 1976.

has to do, of course, with positional typology and cannot be further commented here. Whether or not split ergativity of this kind occurs elsewhere in Austronesian is still open to question.

There seems to be only one other linguistic family where parallels to the Australian phenomenon are found with some frequency, and these are the Sino-Tibetan languages of the Himalaya.

Split ergativity according to animacy seems to be quite common in this language family. Unfortunately, in this region far less research has been done with respect to case-marking typology than in Australia. Our knowledge in this domain is still so rudimentary that all that can be put forward here are but tentative approximations. Much further study is needed, but it already is clear that this is a promising field and that insight into the typology of grammatical relations would greatly benefit if the Sino-Tibetan languages were half as well documented as Pama-Nyungan.

The only language for which conclusive proof of the existence of split ergativity can be given, is Kanāshī:

(13) *Kanāshī* (Sino-Tibetan)

	+deix	-deix <sup>^</sup> +def	-deix <sup>^</sup> -def	
A <sub>1</sub> /Z <sub>1</sub>	<i>gu</i>	<i>sūr</i>	<i>sūr</i>	
A <sub>2</sub>	<i>gu</i>	<i>sūr.as</i>	<i>sūr.as</i>	+ Δ
Z <sub>2</sub>	<i>aŋ.p</i>	<i>sūr.ap</i>	<i>sūr</i>	+ Δ
	“I”	“swine”	“id.”	

This structural diagram is based on a thorough analysis of the relatively abundant text material offered in Grierson's LSI. The [+def]-distinction is hypothetical. It accounts well for the occurrences in the aforementioned corpus. Further refinements are of course necessary, but I think that this proposal is essentially correct. As can be seen, the structure of Kanāshī is in all points identical with what has been found in Warluwara (8). The postulate that referentially based object splits can combine with animacy based subject splits is once more confirmed.

Without doubt, Kanāshī is not the only member of its family to show such a structure. Similar phenomena are reported from Kham and from the Mukhli dialect of Thulung<sup>19</sup>. I have found them in Garwhal and Sunwār. Consequently, it can be stated that at least five Sino-Tibetan languages belong to this type, which up to now was invariably exemplified by Pama-Nyungan. Very likely the real number of these languages is significantly higher, but for the moment no more can be said.

To complete this picture, one example of a language with unsplit ergativity but with DOM should be included. This type is rather seldom found in Australia (see (9)

<sup>19</sup> This has been mentioned in Baumann 1979.

above), but it seems to be relatively widespread in the Himalaya, where splits in the ergative paradigm look like an innovation. One current pattern can be represented as follows:

(14) *Gurung* (Sino-Tibetan)

	+deix	+hum	-hum	
A <sub>1</sub> /Z <sub>1</sub>	<i>ŋa</i>	<i>mhī</i>	<i>ra</i>	
A <sub>2</sub>	<i>ŋa.dī</i>	<i>mhī.dī</i>	<i>ra.dī</i>	- Δ
Z <sub>2</sub>	<i>ŋa.lādī</i>	<i>mhī.lādī</i>	<i>ra</i>	+ Δ
	“I”	“man”	“goat”	

This picture resembles in every detail the diagrammed structure of Duungidjawan (9).

At the outset, a substantial and a methodological claim were made. Both have been confirmed by the empirical data.

First, there can be no doubt about the interaction between lexical semantic features such as animacy, and grammatical relations. This has often been remarked, and I shall not insist upon it any further.

Second, this investigation has shown the importance of frequency distributions as the ultimate base of universal regularities. It is highly significant that the two categories considered here, namely differential object marking and split ergativity, are by no means equal, either in frequency or in areal distribution. DOM is an extremely widespread phenomenon which is well attested in a wide variety of languages all over the world and which characterizes many genetic stock as a whole, whereas split ergativity of the kind discussed occurs in perhaps fifty languages of Australia<sup>20</sup> plus several Sino-Tibetan languages and a handful of other languages scattered in different areas. Even if some counter-examples to the hypothetical-universal implication (2) were to be found, this would not disprove the basic validity of the probabilistic law which underlies it. Transitive patients are differentially marked with a far higher degree of probability than are transitive agents. The study of frequency distributions shows the existence of something like dominant and recessive grammatical traits. The basic grammatical relations do not behave in a symmetrical fashion.

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<sup>20</sup> This rough estimation is based upon Blake 1977.

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