

# **Reduced pronominals and argument prominence**

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## ***1. Introduction***

As is well known, elements which function as personal pronouns are not syntactically uniform, but may have a number of different formal realizations. In a recent paper Bresnan (1998) presents a five-way typology of the forms of personal pronouns based on their phonological and morphological substance. The typology is shown in (1).

- (1) zero bound clitic weak pronoun

The pronominal forms in (1) are classified in terms of two parameters: overt/non-overt and reduced/nonreduced. Zeros are the only non-overt forms, and pronouns are the only nonreduced forms. The present paper is concerned with the four reduced pronominals.

Whereas there appear to be no cross-linguistic restrictions on which grammatical functions may be realized by nonreduced pronominals, such restrictions have been postulated for various reduced pronominals. Bresnan in fact suggests that there is a relationship between argument prominence and all four of the reduced pronominals in (1). Her formulation of this relationship is presented in (2):

- (2) "reduced pronouns of all types are distributed according to a hierarchy of argument prominence, being most common with subjects and decreasing with the increasing obliqueness of arguments. (Bresnan 1998:19).

Given the LFG argument prominence hierarchy in (3), the statement in (2) can be interpreted in at least four ways.<sup>1</sup>

- (3) subject > object > object2 > oblique

The first three interpretations pertain to the cross-linguistic distribution of the reduced forms. Interpretation one is that the reduced pronominals as a group more frequently realize subjects than objects, and more frequently realize objects than object2, and more frequently realize object2 than obliques. The second interpretation is that each of the reduced pronominals in (1), zeros, bound forms, clitics and weak forms more frequently realizes subjects than objects, and more frequently realizes objects than obliques. The third interpretation is that there is a decrease in the likelihood of each of the reduced pronominals in (1), going from left to right, realizing subjects as opposed to objects, and objects as opposed to obliques. Under this interpretation zeros are predicted as more strongly favouring subjects over objects over object2 over obliques than bound forms, and these more strongly favouring subjects over objects over obliques than clitics etc. The fourth interpretation pertains to the language internal distribution of the reduced pronominals. If thus interpreted (2) can be understood as specifying that

Within every language no reduced pronominal in (1) will be able to realize an argument higher on the argument prominence hierarchy than any reduced pronominal to its left. Thus there should be no languages, for example, with weak subject pronouns and clitic object pronouns or clitic subject pronouns and bound object ones.

The present paper seeks to determine which of the four interpretations of the relationship between reduced pronominals and argument prominence expressed in (2) is valid by

examining the distribution of reduced pronominals in a cross-linguistic sample of 284 languages.<sup>2</sup> The paper is organized as follows. Section two presents in more detail Bresnan's typology of reduced pronominals and comments on certain aspects of my classification of pronominal forms with reference to this typology. Section three considers, in turn, each of the four interpretations of the relationship between reduced pronominals and argument prominence with respect to the distribution of reduced pronominals in the languages in the sample. Finally, section four summarizes the findings and offers some generalizations in regard to the distribution of reduced pronominals.

## 2. *The typology of reduced pronominals*

As far as I have been able to determine, the four reduced pronominals in Bresnan's typology are to be understood as follows. Zero designates pronominals having a null structure with variable referentially as in the Mandarin (4) and (5) where the zero form may stand for any of the persons indicated, depending on the context.

Mandarin

- (4) Xiaohong de meimei shuo /,0 xihuan  
 Xiaohong MD young sister say like  
 tan gangqin  
 play piano  
 `Xiaohong's younger sister says that (I/you/he/she/we/you/they) love(s) to play piano.  
 (Y. Huang (to appear p.84))
- (5) Xiaoming yiwei laoshi you yao zeguai /,0 le  
 Xiaoming think teacher again will blame CRS  
 `Xiaoming thinks that the teacher will blame  
 (me/you/him/her/himself/herself/us/you/them) again. (Y.Huang (to appear:104))

It does not cover cases of pro-drop accompanying overt person inflection as in the Polish (6b) or null forms which are open only to an arbitrary interpretation as in the Italian (7) or sporadic instances of ellipsis of topic pronouns, so-called pronoun-zap, as in the English (8).

Polish

- (6) a. Basia kupila nowy samochód.  
 Basia:NOM buy:3SG:F:PAST new car:ACC  
 `Basia bought a new car.'
- b. /,0 kupila nowy samochód.  
 buy:3SG:F:PAST new car:ACC  
 `She bought a new car.'

Italian

- (7) Questa musica rende /,0 allegri  
 this music renders happy  
 `This music renders (one) happy.'

(8) (I) didn't recognize that.'

Bound pronominals designate pronominal inflections expressed by affixal structure on a head, as in the Polish (6b). Clitic pronominals embrace Zwicky's (1985) special clitics, i.e. elements that have a specialized syntactic position and are phonologically bound to a host such as the enclitic *'am* in (9).

#### Southeastern Tepehuan

- (9) a. va-co-cos-'am            gu-'a'ahl  
      CMPL-RDP-sleep-3PL    ART-children  
      'The children are sleeping.'
- b. ma'n-'am            tu-vacuan            gu-jannuhl  
      one-3PL            DUR-wash            ART-cloth  
      'They are washing (out) a (piece of) cloth.' (Willet 1986: 67)

And finally weak pronominals are atonic free forms neither phonologically nor morphologically bound to a constituent, differing from free unaccented pronouns in form and syntactic distribution. As this last category of pronominals is not yet firmly established in the literature, it is not absolutely clear to me what type of pronominal forms it is intended to cover.

The term weak pronoun is primarily associated with the clitic- like Germanic pronouns such as the reduced subject and object forms in Dutch, e.g. *'k* (I) as opposed to *Ik* or *me* (me) as opposed to *mij*. However, there is considerable disagreement in the literature on whether these and other clitic-like pronouns in Germanic do in fact constitute a separate class of pronouns or rather are simply the Germanic equivalents of clitics and thus should be treated as such. Cardinaletti & Starke (1999), on the other hand, extend the class of weak pronouns to cover "mildly deficient pronominals" forms that: cannot be coordinated, necessarily refer to human referents; cannot be doubled by a full NP, must occur at s-structure in special derived positions but in contrast to clitics occupy positions which seem to be those of maximal projections. Under their analysis, the class of weak pronouns includes some, though not all the Germanic clitic-like pronouns, but also forms such as the Italian *loro* 'them' and *egli* 'he' ((10), and the French reduced subject pronouns such as *il* 'he' (11).

#### Italian

- (10) a. Non dirò    mai   loro tutto  
      no say: fut: 1sg never them everything  
      'No, I will never say everything to them.'
- B. Egli mangia della zuppa e beve del vino  
      he eats of-the soup and drink of-the wine  
      'He eats the soup and drinks the wine.' (Cardinaletti & Starke 1999:166)

#### French

- (11) Il me voit  
      he me sees  
      'He sees me.'

I have not been in a position to determine to what extent Bresnan's weak pronouns

correspond to those of Cardinaletti & Starke (1999). The existence in a language of weak pronouns in their sense is rather difficult to establish since it demands detail comparison of the distributional patterns of both strong and clitic-like forms. Needless to say such detailed distributional data is available only for a very small number of languages. Therefore though in my investigation I have taken note of potential instances of weak pronouns, I am not at all certain whether they do in fact qualify as such. And, due to the unavailability of adequate data, I have undoubtedly failed to detect the existence of weak pronouns in many a language that potentially does have them. In sum, the distributional data on weak pronouns to be presented below cannot be considered to be reliable.

As for the first three categories of reduced pronominals, i.e. zeros, bound forms and clitics, while the vast majority of the reduced pronominal forms occurring in the languages in my sample fall transparently into one of these three types, two potential exceptions need to be mentioned. The first of these are person inflections attached not to a lexical head but to a catalyst particle as in (11) from the Australian language Djaru.

Djaru

- (12) ngaju-ngku nga-**run-nyanta** makkarta man-i  
 I-erg CAT-1sg:nom-3sg:loc hat:abs take-past  
 yampakina-ngu  
 child-abl  
 'I took a hat from a child.' (Tsunoda 1981:58)

Such forms have been treated in the literature both as bound and as clitics. I classified them as bound. The second problematic personal forms are freestanding combinations of person forms fused with tense. I treated such forms also as bound, however, provided that there were corresponding tenseless pronominal forms in the language, which were nonreduced. If there were no such forms, I treated the pronoun and tense combinations as simply free, nonreduced pronouns. Such is the case in Iai, an Austronesian language spoken on the Loyalty Islands, in which the subject pronouns occur with a tense suffix but are not reduced relative to the independent object forms. Compare (13a,b) with (13c).

Iai

- (13) a. orin-e ano ke walun  
 3pl-pres make a noise  
 'They make a noise.'
- b. orin-a he  
 3pl-fut go  
 'They must go.'
- c. am-e o orin  
 3sg-pres see them  
 'He sees them.' (Tryon 1968:, 63, 49, 87)

A final point that needs to be mentioned in regard to my classification of reduced pronominal forms involves languages in which all the person forms within a paradigm are not of the same type. Such languages are not very common. One case in point is Nadeb in which all the subject and object forms are proclitics with the exception of the third person plural, which is a prefix. In classifying the reduced pronominals in the languages in my sample, I ignored such differences in realization and took into account only the dominant forms.

### ***3. The distribution of reduced pronominals and argument prominence among the languages in the sample***

#### 3.1 The argument prominence hierarchy

In the LFG argument prominence hierarchy presented earlier in (3) the object<sub>2</sub> relation is associated with patients in ditransitive clauses which have undergone what is commonly referred to as dative-shift as in the English (14b).

- (14) a. Anne handed the book to Tony.  
B. Anne handed Tony the book.

Since not all languages display such dative-shift alternations, my investigation of the relationship between reduced pronominals and argument prominence, will be conducted with reference to a somewhat different argument prominence hierarchy, namely that in (15).

- (15) A > P > R > oblique

The A and P relations correspond to the LFG grammatical functions of subject and object in transitive clauses. The R relation, by contrast, covers the semantic recipient rather than the patient in ditransitive clauses. And the oblique relation encompasses participants bearing semantic roles typically associated with non-arguments, such as locatives, instrumentals and comitatives.

Having clarified the nature of the argument prominence hierarchy that I have used in the investigation, let us consider the relationship between reduced pronominals and argument prominence defined by the languages in the sample.

#### 3.2. Interpretation one

The first interpretation of the relationship between reduced pronominals and argument prominence expressed in (2) is that reduced pronominals as a group more frequently realize As than Ps, and more frequently realize Ps than Rs, etc. That this is indeed so is depicted in Table 1.<sup>3</sup>

Reduced Pro.	A	P	R	Oblique
No. lgs	236	196	107	8
%	84	69	38	3

The vast majority of languages have some form of reduced pronominals for As, somewhat fewer for Ps, just over a third for Rs and hardly any for obliques.

That reduced pronominals as a group should exhibit such a distribution may be seen as

being functionally and cognitively motivated. The A relation typically encodes highly accessible participants in the sense of Givon (1983) and Ariel (1988, 1991), i.e. participants manifesting properties associated with the left hand side of the hierarchies in (16) as opposed to those on the right.

- (16)
- a. Speaker > addressee > non-participant (3rd person)
  - b. High physical salience > low physical salience
  - c. Topic > nontopic
  - d. Human > animate > inanimate
  - e. Repeated reference > few previous references > first mention
  - f. No intervening/competing referents > many intervening/competing referents

Accessibility in turn is viewed as having a direct bearing on formal encoding, the more accessible the referent, the less coding required. This is shown in the simplified version of Ariel's accessibility marking scale in (17).

- (17) The accessibility marking scale

zero < reflexives < poor agreement markers < rich agreement markers <  
 reduced/cliticized pronouns < unstressed pronouns < stressed pronouns < NP

Thus given the association between As and high accessibility, the fact that the overwhelming majority of languages have at their disposal some form of reduced pronominals for As is hardly surprising. By the same token reduced pronominals for oblique constituents which typically encode referents low in accessibility should be rare. And as Table 1 suggests, this is indeed so.

The encoding by reduced pronominals of constituents bearing semantic roles characteristic of obliques is often found in applicative constructions, as is the case in various Bantu languages and also in Yatzachi el bajo Zapotec. Observe that whereas in (18a) a free pronoun is used for the third person, in the applicative (18b) a reduced form is used which is bound to the verb.

Yatzachi el bajo Zapotec

- (18)
- a. o-i?-a len ile-bo?  
 cont-sit-1sg with stem-3familiar  
 'I am sitting with him.'
  - b. o- i?i-len-a- ?a- bo?  
 cont-sit-com-1sg-appl- 3familiar  
 'I am sitting with him.' (Marlett 1985: 123)

Significantly, reduced pronominals are typically used to encode oblique participants that are human as opposed to nonhuman in accordance with the accessibility hierarchies in (16). Such is the case generally in Djaru, as illustrated earlier in (12) where a bound locative pronoun cross-references a human source and other Australian languages, for example, Ngaanyatjara.

- (19) a. Vincent-nga-nta mapitya-ngu nyuntu-lakutu  
 Vincent-nom-2sg:obl go-past you-all  
 'Vincent went to you.'
- b. mantyi-nu-rni nganku-lamartatyi kuka  
 get-past-1sg:obl me-abl meat  
 'He/she got the meat from me.' (Glass & Hackett 1970:42)

As for the use of reduced pronominals with Ps, the fact that reduced pronominals are less frequently used for Ps than for As again correlates with the relatively lower accessibility of the former as compared to the latter. The same, does not, however, necessarily hold for Rs relative to Ps at least in languages which treat Rs as core relations. The significant decrease in the number of languages exhibiting reduced pronominals with Rs as opposed to Ps in Table 1 suggests that most of the languages in the sample treat Rs on a par with oblique constituents rather than like transitive objects.

### 3.3 Interpretations two and three

The second interpretation of the relationship between reduced pronominals and argument prominence expressed in (2) is that each of the reduced pronominals in (1), zeros, bound forms, clitics and weak forms more frequently realizes As than Ps, and more frequently realizes Ps than Rs etc. The distribution of each of the four types of reduced pronominals relative to argument prominence among the languages in the sample is shown in Table 2.

	A	P	R	Oblique	Total
Zero	11	15	0	0	26
Bound	197	148	92	3	440
Clitic	26	31	13	3	73
Weak	5	2	2	2	11

We see that interpretation two does not hold. It holds for bound forms and perhaps weak forms but not for zeros and clitics. Both of the latter favour Ps over As rather than vice versa.

The fact that zeros appear to be more common with Ps than with As runs counter to the predictions of the accessibility account of grammatical encoding; as As are more accessible than Ps, we would expect more languages to use the most reduced type of encoding for As than for Ps. Yet this does not appear to be the case among the languages in my sample, nor for the matter in the 100-language sample of Gilligan (1988).

The slightly higher frequency of clitics with As as opposed to Ps, on the other hand, is in line with the predictions of accessibility theory. Since clitics constitute a less attenuated form of encoding than bound forms or zeros, they should be more common with Ps, which tend to encode referents of lower accessibility, than with As.

The data in Table 2 also reveal that the third interpretation of the statement in (2) is similarly not valid.



There is no decrease in the likelihood of each of the reduced pronominals in (1), going from left to right, realizing As as opposed to Ps, and Ps as opposed to Rs etc. All four grammatical relations, As, Ps, Rs and obliques are more commonly realized by bound forms than by zeros. And contrary to interpretation three, zeros and clitics favour Ps over As rather than vice versa. Only the bound and weak forms more strongly favour As relative to Ps and these relative to Rs and obliques.

### 3.4 Interpretation four

The fourth interpretation of the statement in (2) relates to the language internal distribution of reduced pronominals. According to this interpretation, no reduced pronominal in (1) should be able to realize an argument higher on the argument prominence hierarchy than any reduced pronominal to its left.

There are several languages in the sample, which counter this prediction. First of all there are languages with zero objects but bound subjects. This is the case in Kobon, Kewa, Finnish and Chamorro (20).

Chamorro

- (20) in-bisita (qui') q' espitatt  
 1pl-visit (him) loc hospital  
 'We visited (you, him, them) at the hospital.' (Chung 1984:120)

Secondly, there are languages, which have bound objects but no reduced pronouns for subjects. Such languages include: Barai, Doyayo, Gilyak, Kera, Panyjima (only one bound object form for 1sg) and Sema (only bound objects for 1sg & 2sg). This pattern is particularly frequent among the languages of Micronesia. It is found in Gilbertese, Kusaiean, Ponapean, Pulo-Annian, Puluwat, Trukese and Woleaian (21).

Woleaian

- (21) a. Sar kelaa re sa tangileng  
 those children 3PL ASP cry  
 'Those children over there cried.'
- b. Re shepegi-yei  
 3PL kick-1SG  
 'They kicked me.' (Sohn 1975: 93-94)

Thirdly, some languages have bound objects, but clitic subjects. Among them are Kutenai, Southern Tepehuan and Mundari (22).

Mundari

- (22) Samu cepeko-e lel-ko-tan-a  
 Samu birds-3SG look-3PL-PRES:INDIC  
 'Samu is looking at the birds.' (Cook 1965:239)

The combination of bound object but weak subject is also potentially attested, namely in Yapese. As shown in (23), the subject may occur in a full form as in (23a) or a reduced form

as in (23b). The object, on the other hand, is bound to the verb.

Yapese

(23) a. Gamow        raa        guye-een  
         1:dl:excl   fut        see-2sg  
         `We will see you.'

         b. Ka        gu        guy-eew  
         perf    1:excl see-dual  
         ``We saw it.'(Jansen 1977:268)

And finally, there is one language in the sample, namely Gude, which has bound Rs but no bound As or Ps.

It is also worth noting that not all of the distributions predicted by interpretation four are attested. Most notably there appear to be no languages which have zero subjects but bound or clitic objects.

Though the distribution of reduced pronominals does not directly reflect the hierarchy of argument prominence in all languages, there is nonetheless a strong cross-linguistic tendency for reduced pronominals to be distributed in line with the argument prominence hierarchy. Of the 284 languages in my sample only 27 (9%) utilize a more reduced pronominal for some argument lower in the argument prominence hierarchy than for an argument higher on the hierarchy. Thus though interpretation four does not hold as an absolute universal, it does hold as a statistical one.

#### **4. Concluding remarks**

My investigation of the four interpretations of the relationship between reduced pronominals and arguments prominence expressed in (2) has revealed that the first interpretation definitely holds. Reduced pronominals as a group are distributed according to a hierarchy of argument prominence, being most common with As and decreasing with the increasing obliqueness of arguments. By contrast interpretations two and three do not. It is not the case that each reduced pronominal more frequently realizes arguments higher on the argument prominence hierarchy than those lower on the hierarchy (interpretation two). Nor is there a systematic decrease in zeros, bound forms and weak forms, going from left to right, realizing As as opposed to Ps, and Ps as opposed to Rs etc. (Interpretation three). Finally, interpretation four, though not valid for all languages, is reflected in the overwhelming majority. Languages do display a strong tendency to use more reduced forms of pronominals for arguments higher on the argument prominence hierarchy than those for lower on the hierarchy. Virtually the only exceptions to this involve As and Ps. In a relatively small number of languages more reduced forms of pronominal encoding are available to Ps than to As, either zeros as opposed to bound forms, or bound forms as opposed to clitic, weak forms or independent pronouns. I have no real explanation to offer why this should be so.<sup>4</sup>

In the light of the above investigation, a number of additional points in regard to the distribution of reduced pronominals can be made. First of all, not all the reduced pronominals appear to be open to all the positions on the argument prominence hierarchy. I have come across no language with zero Rs or obliques.<sup>5</sup> And the only cases of weak pronominal obliques that I know of are in Italian and Dutch. According to Cardinaletti (1999:66-67) the objects of the prepositions, *esso* in (24) and *r* and *ze* in (25) are weak pronouns.

Italian

(24) Di        esso        abbiamo        parlato        a lungo

about it have:1pl talked long  
 ‘We have talked long about it.’

Dutch

(25) Ik kijk naar ' r/ze  
 I look at her/them  
 ‘I look at her/them.’

Secondly, and not very suprisingly, each position on the argument prominence hierarchy tends to be realized by only one reduced pronominal. Thus if a language has bound As it tends not to have also clitic or weak ones. And if a language has clitic Ps it is unlikely to also have bound ones. There are exceptions to this. Thus the Uto-Aztecan languages Cora and Northern Tepehuan as well as the Northern Italian dialects Fiorentino and Trentino and also arguably Polish have both bound A pronouns and A clitics. The Omotic language Gimira has weak A pronouns and for the third person feminine and second and third person plural also bound forms. And Dutch, Italian and Slovak have both clitic and weak object pronouns, at least under some analyses. And thirdly, no language in the sample has all four of the reduced pronominals and only Italian has three, bound subjects and clitic and weak objects.

## Appendix

Languages in the sample (N=284) according to macro-area and genetic classification based on Ruhlen (1987)<sup>6</sup>.

Africa: **Afro-Asiatic**: Beja; Berber (Tamazight); Biu-Mandara (Gude); Egyptian (Coptic); Chadic (Hausa, Kera); Cushitic (Bilin, Mupun, Oromo); Omotic (Dizi, Hamar) Semitic (Amharic, Chacha, Geez, Hebrew,); **Khoisan** (Nama, Sandawe) **Niger-Kordofanian** Adamawa-Ubangi (Doyayo, Koh, Mumuye, Sango, Zande); Bantoid (Babungo, Ndonga, Swahili); Benue- Congo (Mambila); Defoid (Yoruba); Dogon; Gur (Dagare, Koma, Koromfe); Igboid (Igbo); Ijoid (Kolokuma Ijo); Kordofanian (Katla, Krongo); Kru (Grebo); Kwa (Ewe, Nupe); Mande (Bambara, Mende); Northern-Atlantic (Diola-Fogny, Fula, Kisi); **Nilo-Saharan** Berta; Fur; Kunama; Maban (Mesalit); Nilotic (Nandi, Pari, Turkana); Saharan (Bagirmi, Kanuri, Ngiti); Surma (Murle); Songhai; **Pidgins & Creoles** (Kreol)

Southeast Asia & Oceania: **Sino-Tibetan** Sinitic (Mandarin); Karen (Eastern Kayah Li, Sgaw); Burmic (Burmese, Rawang, Sema); Tibetic (Byangsi, Chepang, Limbu, Lushai, Newari) ?**Austriac** Miao Yao (Miao); Mon-Khmer (Khasi, Khmer, Minor Mlabri, Sre, Temiar, Vietnamese); Daic (Thai); Atayalic (Atayal); Paiwanic (Paiwan); Tsouic (Tsous); Philippine Austronesian (Chamorro, Kapampangan, Konjo, Malagasy, Muna, Palauan, Tagalog, Uma, Yapese); Sundic (Achinese, Indonesian, Sundanese); Central Eastern Malayo-Polynesian (Anejom, Dehu, Fijian, Kaliali-Kove, Kilivila, Larike, Mono Alu, Maisin, Maori, Samoan, Savu, Tinrin, Tolai)

Eurasia: **Altaic** Mongolian (Dagur); Tungus (Evenki, Ju-Chen); Turkic (Crimean Tatar, Turkish); Japanese, Korean; **Kartvelian** Georgian; **Nakh-Dagestanian** Archi; **Northwest Caucasian** Abxaz; **Chukchi-Kamchatkan** Chukchi **Elamo-Dravidian** Dravidian (Kannada); Elamite; ?**Austriac** Austroasiatic (Mundari); **Indo-Hittite** Albanian; Anatolian

(Hittite); Armenian; Celtic (Welsh); Germanic (Dutch); Greek; Indic (Hindi, Kashmiri); Iranian (Kurdi, Ossetic); Romance (Italian); Slavic (Polish); **Language Isolates** (Ainu, Basque, Burushaski, Gilyak, Hurrian, Ket, Nahali, Sumerian) **Uralic-Yukaghir** Finnic (Finnish); Ugric (Hungarian); Yukaghir

Australia & New Guinea: **Australian** Garawan (Garawa); Gunwinyguan (Ngalakan); Daly (Malak-Malak, Ngankikurungkurr); Mangarayi; Maran (Alawa); Nyulnyulan (Nyulnyul); Pama-Nyungan (Arabana, Bandjalang, Gugu Yimidhirr, Kalkatungu, Kayardild, Ngiyambaa, Panyjima, Uradhi, Yidin, Yukulta); Tiwi; West Barkly (Djingili); Wororan (Ungarijn); Yiwaidjan (Maung); **Pidgins & Creoles** (Cape York Creole); **?Indo-Pacific** Trans New Guinea (Amele, Barai, Daga, Grand Valley Dani, Imonda, Hua, Kewa, Kobon, Salt-Yui, Sentani, Selepet, Tauya, Wambon, Waskia, Usan); West Papuan (Sahu, Tehit, West Makian); Geelvink Bay (Yava); Sko (Vanimo); Torricelli (Au, Mountain Arapesh); Gapun; Sepik (Alamblak, Awtuw, Yessan Mayo, Yimas); East Papuan (Anem, Nasioii, Yele)

North America: **Eskimo-Aleut** (Greenlandic); **?Na-Dene** Athapaskan (Navajo, Umpqua); Haida; Tlingit) **?Amerind** Kutenai; Yurok; Algonquian (Plains Cree); Chimakuan (Quileute); Salishan (Comox); Wakashan (Nootka); Keresan (Acoma); Yuchi; Siouan (Dakota); Caddoan (Wichita); Iroquoian (Tuscarora); Tsimshian (Coast Tsimshian), Chinookian (Upper-Chinook); Takelma; Coos (Hanis Coos); Siuslawan (Lower Umpqua); Sahaptin (Nez-Perce); Wintun; Maiduan (Mountain-Maidu); Yokuts (Valley-Yokuts); Miwok (Southern Sierra Miwok); Zuni; Tunica; Atakapa; Yuki-Wappo (Wappo); Muskogean (Choctaw, Koasati); Huave; Mixe-Zoquian (Copainala-Zoque, Sierra Popoluca); Mayan (Jacalteco, Tzutujil); Karok; Palaihnihan (Achumawi); Pomo (Southeastern Pomo); Washo; Seri; Salinan; Yuman (Mohave); Tonkawa; Tarascan; Tanoan (Kiowa); Takic (Luiseno); Pimic (Northern Tepehuan); Aztecan (Pipil); Coric (Cora); Mixtecan (Copala Trique); Zapotecan (Valley Zapotec); Popolocan (Choco); Chinatecan (Lealao-Chinantec)

South America: **?Amerind** Yanoman (Sanuma); Misumalpan (Miskito); Rama; Aruak (Ica); Guaymi; Warao; Mura (Pirahã); Choco (Epena Pedee); Waorani; Zaparoan (Iquito); Quechuan (Imbabura Quechua); Aymaran (Aymara); Mapudungu; Tucanoan (Retuarã, Southern Barasano, Tuyuca); Nambiquaran (Nambiquara); Cayuvava; Candoshi; Tupi-Guarani (Guarani); Arawan (Paumari); Maipuran (Amuesha, Arawak, Ashaninca, Warekena, Waura); Peba-Yaguan (Yagua); Carib (Makushi, Hishkaryana); Panoan (Capanahua, Chacobo); Tacanan (Cavinena); Bororoan (Bororo); Ge-Kaingang (Canela-Kraho, Xokleng); Nadeb; **Pidgins and Creoles** (Saramaccan)

### **Endnotes**

1. Bresnan (1998) does not elaborate on the statement in (2) since it is made only in passing, her article being concerned with the unmarked nature of independent pronouns.
2. The composition of the sample, which was established according to the sampling methodology outlined in Rijkhoff et al. (1993) is presented in the Appendix.
3. My information on reduced pronominals is essentially based on descriptive grammars which differ widely with respect to the range of phenomena that they cover and the details they provide. On the whole, the formal realizations of subject and object pronominals in transitive clauses are well discussed. That of patients and recipients in ditransitive clauses and of obliques considerably less so. Accordingly I have no data for 24 of the languages with respect to the pronominal forms of recipients. My data for obliques is even more sketchy.

Therefore the data in Table 1 and also Tables 2, to be presented below, with respect to recipients and particularly of obliques must be viewed with some caution.

4. It is not the case that the languages in question are morphologically or syntactically ergative and thus adhere to an argument prominence hierarchy where the P is higher than the A.

5. Colloquial Sinhala is reported to display zero recipients. But I have not been able to substantiate this.

6. I am aware of the fact that some of the phyla recognized by Ruhlen (1987) are highly controversial. I have indicated these with a question mark.

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