Alain Lemaréchal (Univ. Paris-Sorbonne, EPHE, LACITO):
THREE HYPOTHESES ON PAN *Su AS "2PL" AND ON THE CHRONOLOGY OF THE DIATHESIS AND VOICE SYSTEMS:
THE FORMOSAN LANGUAGES ARE NOT SO "ARCHAÏC"

I shall not be dealing here with the subject which I announced: the etymology of the PAN affix *aR-, as stemming from the verb known in the form of *aRi "come, let's go" (Blust 2001). You will find this hypothesis expounded at the end of the written version of this paper.

I would like to seize the occasion of this 11th ICAL and of the publication of my book on the comparative grammar of the Austronesian languages¹ to present two hypotheses much more central in this book, and in my work in general: the first one is that the reasoning which was applied to explain how *mu "2pl" switched to "2sg" via "2polite" must equally be applied to all the /u/ (< *Su) which appear in the 2nd person markers: *(S)u, *ka(S)u, *i(S)u, *mu, *miu, etc.; this means that it is *Su which changed from meaning "2pl" or "2 indifferent to number" to meaning "2sg", including the Formosan *iSu; this also means that the change in meaning of *mu cannot serve as the basis for the hypothesis for which it was used, namely to establish the position of the Formosan languages; the second hypothesis is that the verb systems with cross distinction between Active-Antipassive voice *-um-/*m(u)-vs. Passive *-in-/*n(i)- vs. unmarked "ergative forms" and applicative forms with the suffixes *-i and *-an (the latter eventually renewed by *-akan) are older than the 4 voice (ou "focus") system attested to by the Formosan and Philippine languages; the "4 focus" system is a reorganization of the former, which system is attested to by Chamorro, Bugis, Mori, Wolio, Tukang besi, etc.; the origin of this reorganization should be sought for in the reinterpretation of the Passive (+ Perfect) infix *-in- as a Perfect marker, indifferent to voice, *-in-/*ni- itself being the result of the merge between the Perfect *n- and the Passive *(S)i-; the "4 focus" configuration is a shared innovation of the Formosan and Philippine languages, or like, as Malagasy, and not the reverse.

The 1st hypothesis: *i-(S)u/*(S)u = "2pl" (see Lemaréchal 2003, 2009, 174-182)

My first hypothesis is about *Su as originally a "2pl" marker. This hypothesis already was the subject of a paper I presented in 2004 (Lemaréchal 2004b) and of a short publication in the BSL 2003. It consists in showing that the meaning of the person stem *(S)u started out by being, and remained in some of the cases, that of "2pl" (or of "2 indifferent to number" similar to English you, or as in Bugis for example). I believe in fact that the explanation given for the distribution of the meanings of *mu, which exclusively means "2pl" on Formosa but "2sg" Possessive-Agent outside of Formosa, as being due to the switch from "2pl" to "2sg" via a "2 polite", should be enlarged to cover all 2nd person markers containing a */u/.

The explanation for the two meanings of *mu "2pl" on Formosa vs. "2sg" Possessive outside of Formosa actually leaves several issues unsolved:

- 1) Why this switch from "2pl" to "2sg" via a "2 polite" did only take place in the case of the Possessive-Agent?
- 2) What is the origin of the free form *(i)ka(u) found outside of Formosa instead of *iSu (and in Tsou "2sg" ko alongside su in Tung (1964: 106)? Furthermore, outside Formosa, one finds various forms of "2pl" in *iu see table 1 —: *iu (in Kapampangan, Ilocano, Pangasinan, etc.), *n-iu (in Yami, Ivatan, Hiligaynon, Tagalog, Old Javanese, etc.), *m-iu (in Tondano, Chamorro, Mori, Wolio, Tukang Besi, etc.): all of these */iu/ "2pl" could

¹. Lemaréchal 2009. Comparative Grammar and Typology. Essays on the Historical Grammar of the Austronesian Languages. Leuven-Paris-Walpole (Mass.), Peeters.

stem from *iSu; just as a certain number of markers in -u for "2sg" or "2pl" scattered about the entire family could easily be explained based on *Su.

It is therefore more simple to say

- 1) that the primary meaning of *(i)Su is "2pl" (just as *mu < *m-Su "2pl"),
- 2) that *(i)Su on Formosa and *m-Su outside Formosa have switched to "2sg", and lastly
- 3) that "2sg" *ka-u stems from a *ka-Su. In some of the languages, this form has been recharacterized as *ikau through the presence of a prefix *i- (most probably stemming from the article *i) which one finds in some languages in all persons; the bound form has been modified as *ka(u) and the Subject-Topic marker ka- has been reinterpreted as being the stem attached to the meaning "2sg": see the table 1 and examples 1.

Table	<u>e 1:</u>										
	Amis	Kapampangan	Tagalog	Palau		Wolio					
	Subject/Independent			Indpdt	/Object	Subje	ct /Object				
sg 1	kaku	'aku	ako	ngák	-ak	iaku	-aku				
2	kisu	'ika	ikaw, ka	káu	-au	ingko	o -ko				
3	cingra	'iya, ya	siya	ngii	- i i	incia	-ia/ea/a				
incl	kita	'ikata	kata	kíd	-id	ingki	ta manga-				
pl 1	kami	'ikami, 'ike	kami	kęmám	-emam	ingka	mi -kami				
2	kamu	'itayu, 'iko	kayo	kęmiu	-emiu	ingko	miu -komiu				
3	cangra	'ila	sila	ngii/tí	r)ø/-terir	incia	'-ia/ea/a				
					!						
	Possessive/Agent			Poss			Poss /Agent				
sg 1	nu maku	ku	ko	-k	k-	-ku	ku-				
2	nu misu	mu	mo	-m	cho(m)-	- 'u	u - (= 2p1)				
3	nu ningra	na	niya	-1	l(e)-	-na	a - (= 3pl)				
incl	nu mita	ta	nita	-d	d(e)-	-ta	ta-				
pl 1	nu niyam	mi	namin	- (m) am	ki(m)-	-mami	ta-				
2	nu namu	yu	ninyo	- (m) iu	cho(m)-	-miu	u- (= 2sg)				
3	nu nangra	da, ra	nila	-(r)ir	1(e)-	-na	a- (= 3sg)				

NB: languages outside Formosa having reflexes of "2pl" *iu (< *iSu): Kapampangan, Ilocano, Pangasinan, etc.; of *n-iu (< *niSu): Yami, Ivatan, Bikol -ndo, Hiligaynon, Cebuano, Tagalog, Old Javanese, Uma ni, Karo Batak ndu, etc.; of *m-iu (< *miSu): Tondano, Chamorro, Palau, Mori, Wolio, Tukang Besi, Uma mi, etc.

The 2sg *m-u is to *ka-u what the 1pl excl m-ami is to k-ami, and $\mbox{m+m}$ is a recessive Genitive-Agent marker limited to person markers: see examples 1a and 1b:

```
(1a) 2sg
     1pl excl
                  *k-ami
                                 *m-ami
(1b)
          Indepdt Pers.
                                 Genitive (-Agent) bound or free
Wulai
          c/s-aku (< *k-aku?) | m-aku, mu (< m-aku)
```

*m-u

2pl	c/simu (< *k-imu?)	m-amu							
Mayrinax 1sg 2pl	[kuing] cimu (< *k-imu?)	mu (< *m-aku, cf. Wulai) m-amu							
Amis 1sg 2sg 1pl incl	k-aku k-isu k-ita	nu m-aku (with nu = genitive-agent article) nu m-isu nu m-ita							
Basay 1sg 2sg 1pl incl	;	<pre>m-aku (opposite bound Poss -aku) m-isu (opposite bound Poss -isu) m-ita (opposite bound Poss -ita)</pre>							

Examples 1:

*ka-u

Then the paradigm for "2sg" outside Formosa is as shown in (1c):

```
(1c) *(S)u 2sg > Subject *k-a-(S)u vs. Genitive-Agent m-(S)u
```

and the distribution between "2sg" and "2pl" in the Formosa languages and outside Formosa is as shown in (1d):

```
(1d) *m(S)u 2pl > KAP mu "2sg" vs. Formosa *mu "2pl" *i(S)u 2pl > KAP yu "2pl" vs. Formosa *iSu "2sg"
```

The only forms which escaped the drift of *(S)u from "2pl" to "2sg" are those which were originally bimorphematic such as *mu and *iu (and its renewals *m-iu and *n-iu), depending on the language subgroups, and which had become opaque and had retained, as is often the case for marks which have become opaque, their original meaning, namely "2pl".

This means that the fact that *mu has only "2pl" meaning in the Formosan languages does not denote any particular archaism; on the contrary, the Formosan languages attest to a late regularization in tabular form leading to a regular distribution of *i(S)u and *mu between "sg" and "pl". This is my first hypothesis.

The 2nd hypothesis: The true history of the diathesis and voice systems (cf. Lemaréchal 1998, 2001, 2009: chap. I and II)

Let's consider my second hypothesis.

The diathesis and verbal voice systems found in the Austronesian languages present two main configurations:

1) The first configuration is the one found in the Formosan languages in the Philippine languages, as well as in the languages of North Sulawesi, in Malagasy, etc., which distinguish at least 4 voices, or "Focuses", with 2 series of focus markers: one for REALIS and one for IRREALIS (or injunctive), and with a past or perfect infix *-in- as presented in table 2 and illustrated by Bikol in examples 2:

Table 2 ("A type configuration"):2

	"REALIS"	"IRREALIS" after negation, etc., injunctive
AF PF LF/PF IF-BF/PF	*-um-/*m(u)- *-on (imperf) / Ø (perf)	*/a (/*-u) *-i *-an

^{2.} The semantic promoted by the 4 focuses are as follows:

AF = agents, sole participants of IntrV with middle meaning,

PF = wholly affected patients,

RF = recipients, O2, local argument of position, movement, displacement verbs,

IF-BF = patients only displaced \pm instruments \pm beneficiaries.

Examples 2 (Bikol):

AF	MAG-tukaw AF sit	na	remo, ne myskum militar kunnom kajemi jemi in militar (z. 19. sept. 18. nem jeg	e be - comment engang ponton - comme, - c	tukaw Ø n	a	"have a seat"
PF	hiling -ON look at PF				hiling-A PF	an gamgam SubjArt	"look at the bird"
LF/PF	namit -AN taste LF	mo Agt2sg				an mangga SubjArt	"taste the mango"
IF/PF	ç	mo Agt2sg	an SubjArt	asin salt	abut -AN IF	an asin SubjArt	"pass the salt"

2) In the second configuration, *-um- (or *mu-, or *m-) is an active or antipassive marker, *-in- (or *ni-, or *i-) is a passive marker and there is a third unmarked form, called "ergative" in some of the languages; the suffixes *-i and *-an (the latter having been renewed as *-akan in a great number of languages) function as applicative markers; this configuration is presented in table 3 and illustrated in examples 3 from Mori:

Table 3 ("B type Configuration"):

```
(dative, instrumental,
                                     beneficiary, displaced object)
Examples 3
         (Mori):
           'andu
                         ana -ku
                                          Ali
                 ~ 0
    3sgSubj massage 3sgObj child 1sgPoss PNArt PN
    "Ali massaged my child"
                          (Barsel 1994: 64-65)
         Ali
                                     -ku
               -um- andu
                                 ana
                                 child 1sgPoss
            TrSpec massage 3sgObj
    PNArt PN
     "Ali was the one who massaged my child"
                                        (ibidem)
     '-in-
          andu
                                       -ku
                 -0
                        -mo
                                   ana
    Passive massage 3sgSubj NonEmphFut
                                   child 1sgPoss
     "my child was (already) massaged"
                                   (ibidem: 65)
```

In this second configuration, the suffixes function as applicative markers which are exactly comparable to what one finds in the Bantu languages, for example, and no longer as voice markers as in the 1st configuration; they promote as objects the arguments whose slots they open. The latter configuration is illustrated by Chamorro, by Old Bugis (which lacks *-in- however, the past is marked by the enclitic na), as well as by Mori, Wolio, Tukang Besi, etc., and POC! It is important to note that the morphological substance matter is identical to that found in the first configuration.

I think that of these two types of configuration, it is the first configuration which stems from the second and not the reverse.

The "4 focus" configuration shows several anomalous features:

- 1) the very existence of 4 basic voices is already in itself idiosyncratic from a typological perspective,
- 2) the markers of these 4 voices, or focuses, in the REALIS, which nonetheless seems to be the basic paradigm, are heterogeneous, including two infixes/prefixes, one prefix and two suffixes,
- 3) one finds a single marker *-an with two different meanings in the REALIS and IRREALIS, for the system's two

more "exotic" voices (respectively RF-LF REALIS and the IRREALIS IF-BF and PF of the displaced object),

- 4) in the REALIS, the marker of the 4^{th} voice has two different, non reducible forms *(S)a- and *(S)i-,
- 5) the meanings of this voice (recurrent in the Formosan languages and the Philippine languages of the Tagalog type, but also for the corresponding applicatives *-i and *-an in the 2nd configuration) make up a rather odd heterogeneous set -- "Instrument Focus" + "Benefactive Focus" + "Patient Focus of the displaced object, but also "Causal', etc. --, to the point that it is called an "Accessory focus" in some descriptions. Lastly one should note that the *-in- admittedly has perfect meaning, progressively more or less generalized to all the REALIS Focuses and even the Actor Focus, but in Patient Focus this same *-in- in itself marks both perfect aspect and Patient Focus.

In the 2nd configuration, the prefixes or infixes are voice markers, the suffixes are applicative markers.

As early as 1998 I proposed considering the suffixes *-i and *-an as former incorporated prepositions. For *-akan no proof is needed as it is still the case in languages such as Tukang Besi (see examples 4):

```
Examples 4:
                                                          roukau
               helo'a -ako
                                te
                                                   te
                                       ana -no
    no-
    3AgtREALIS cook BFApplM OblArt child 3Poss OblArt vegetable
    "she cooked the vegetable for her children"
                                                (Donohue 1999: 182)
                                        ako te
                                                                /ako -'e
                              roukau
               helo'a
                                                    ana-no
                       te
    no-
    3AgtREALIS cook OblArt vegetable Prep OblArt child 3Poss Prep 3
    "she cooked the vegetable for her children/for them"
                                                          (ibidem)
                                wawine
                                              ako-aku
            wila -mo
                                       um-
                       na
    no-
    3REALIS V1go Pft "Nom"Art woman AFRelF V2 1sgObj
    "the woman who did (something) for me has gone" (ibidem: 333)
    mbea-do
                             -naku
                       ako
                                     wa ?
            'u-
    not-yet 2sgREALIS do-for 1sgBF Insistence
     "Haven't you done it for me yet?"
                                       (ibidem)
```

This is the case in Ponape, not only for -(i)ki(n)- ($< *-ak^{\circ}n$), but also for -eng (< *-an) and sang, which still function as prepositions, intraverbal relaters and, in the 3^{rd} person where the person marker is β , as an intraverbal relater = applicative marker (see examples 5):

```
Examples 5 (Ponape):
             peren -ikin
                              -uhk
    1sgSubj happy Instr-Benef 2sgObj
    "I am happy for you"
                         (Rehg 1981: 229)
             duhpi -ki
                                      lihmw -et
                          seri -et
                          child Dem
                                      soap Dem
            bathe Instr
    1sqSubj
    "I bathed this child with this soap" (ibidem: 225)
                                pwuhk -et
                  kihi
                        -eng
            en
                 give IntravRel
                                   book Dem
    1sgSubj Aux
    "I am giving him this book"
                                 (ibidem)
```

For *-an and *-i, they are indeed found as prepositions, especially *i (/Locative *di), but also *an (Lative), as in Mori and in Malagasy (ex. 6):

```
Malagasy

an- dRakoto io trano io

Prep NP Dem house Dem

"this house belongs to Rakoto" (Dez 1980: 78)
```

The chronology can only, if one takes into account the findings of grammaticalization typology, be as follows (table 4):

Prepositions > Incorporation > Applicative markers (> Voice markers)

If one adds the passive infix *-in- to these forms of applicatives, the element governed by the applicative ends up in subject position. For an applicative marker such as *-i and *-an to have been reinterpreted as a voice marker, it would have sufficed that *-in- no longer be interpreted as a \pm past passive marker, but instead as a perfect or past marker indifferent to focus, with the result that the passive meaning was associated with \emptyset ; the arguments objectivized by the applicative then are subjectivized; and this is the case. Thus one ends up in the first configuration.

I posit that it is the reinterpretation of the prefix *ni-/infix *-in- with passive meaning as a past marker indifferent to voice distinctions and, in correlation, the fact that the non perfect (or non past) passive meaning became associated with β , which made possible the alignment in a single paradigm of the antipassive in *-um- (which becomes the Actor Focus), of the unmarked form (which becomes the Patient Focus), and of the former applicative in *-an, which becomes a Locative-Referent Focus.

This hypothesis is necessarily accompanied by two others:

- 1) in *ni- (which gave rise to the passive *-in- in Chamorro, Mori, etc. and marks the past/perfect in the Philippine-Formosan languages), it is the *i- which marks the passive and the *n- which marks the past: indeed, *n- does not need the *i- to mark the past (cf. *n-aR-, *n-aN-, and the proclitic or enclitic *na with the same meaning);
- 2) *n-i- (and *-in-) became separated (non-segmentable) from the *i- (or *Si-, *n-Si- giving *ni- in any case) which originally marked the passive and became the "4th" focus, the most "exotic" of the four, the "Accessory Focus"; it regularly signifies the displaced object Patient Focus ± Instrument Focus ± Benefactive Focus (REALIS), the heterogeneous character of these meanings indicating their residual character, of non-AF non-PF non-RF-LF.

In Tukang Besi, ni- is an allomorph of i- (and of di-); in Sangir (Adriani 1893), n-i- is the past (preterit) of the passive i-.

This latter hypothesis must also be accompanied, in order to account for the facts, by hypotheses (which I will not go into here):

- 1) on the redistribution of the meanings of *-an between destination-recipient promotion and displaced object promotion, the first of these two meaning being the original meaning inherited from the prepositions; displacement verbs of course are at the center of the process since they alone associate local arguments (the semantic role corresponding to Referent and Locative Focus) and displaced objects (semantic role associated with the 4th focus);
- 2) on the redistribution of the suffixes *-i and *-an between REALIS and IRREALIS;
- 3) on the progressive redefinition of *(S)i- from "passive" to PF of the displaced object \pm IF \pm BF, a set of highly variable semantic roles which can be grasped by comparing the Tagalog type Philippine languages and the Formosan languages with languages such as Ilocano (where the displaced object PF is marked by i- + Vb, the BF by i- + Vb + -an, the RF by Vb + -an and the IF by paN-), or Bugis (where -an marks the displaced object, instrument, recipient, destination), etc.

This is my second hypothesis. In this hypothesis, the primary meaning of *i- or *Si- is that of a passive

marker, as found in Wolio, Tukang Besi, as well as in Sangir; *n-i- is foremost the past of this passive, as attested to in Sangir; *i and *an (like *akan) are former prepositions. Incorporation, then the formation of applicatives, precede the alignment in 4 and then more than 4 focuses, through morphemes such as *pa-, *ka-, *aR- and *aN-, partly issued from former verb stems grammaticalized in former serial constructions and univerbated in the verb form.

<u>Conclusions:</u> Preposition incorporation is still a living process in Ponape, the regularization into 4 focuses is a process which has reached its term in the Tagalog type Philippine languages and the Formosan languages. A complete regularization of the distribution of *(i)Su and *mu (<*m-Su) between "2sg" and "2pl" is only complete in the Formosan languages. Nothing in these grammaticalization phenomena shows that the Formosan languages have retained the most trustworthy traces of the oldest stages of the grammatical systems which can be reconstructed using the methods of comparative grammar-reconstruction.

Appendix: A 3rd hypothesis: - *aR-< *aR-i "come, let's go (intr); bring (with) (tr)" (leman Echel 2003: 292-300)

My third hypothesis is that behind the *-aR- present in *paR- (Tagalog p-ag-, m-ag-, n-ag-; Bugis -ar-, Malay ber-, etc.) lies the movement-displacement verb *aRi which means "come, arrive" in its middle diathesis but "bring (with)" in its transitive displacement verb diathesis. In *aRi I will posit that the *-i is the IRREALIS Locative-Referent Focus suffix *-i; in some of the languages, this *aR-i appears with the infix -um- or the prefix m-, but in other languages it appears with the displaced object Patient Focus prefix *i- in the cases where the verb means "bring (with)": in example 7 I quote an excerpt from the article *aRi in the 2001 electronic version of Robert Blust's etymological dictionary, formatted by Alexandre François.

```
Examples 7 (Blust, EtymDict 2001):
(1) */@Ri/ come, let's go!
               /ari/ let's go!
         PAI
               /y-ali/ bring
WMP:
         KAN
               /i-a'li/ bring
         BON
               /ari ko/ come here!
         ΚB
                /aqi?/ come here!; toward the speaker
         BM
   */um-aRi/
               to come
                        ask someone to accompany oneself
F:
         PAI
               /m-ari/
               /um-a'li/
                          come, come along, arrive
WMP:
         KAN
                /om-a'li/
         BON
                          come
                          come here!
         ΚB
                /mari ko/
                        toward the speaker (/-?/ presumably a vocative suffix generalized
         BM
             both to /agi?/ and /magi?/; cf. Blust 1980)
```

The stem *aR- would be part of the set of verbs, well known in grammaticalization typology (Givón 1975: 47-112, 1984: 179-180, Lemaréchal 1998a: 187-228), meaning "bring, put" which, when used in serial verb constructions, serve to introduce an instrument or object, especially a displaced object: see examples 8 taken from Givón 1984.

```
Examples 8:
                     àdá
                                   igi
Yoruba:
           fi
        mo
                    machete cut
                                  wood
             took
                                         (Givón 1984: 179)
         "I cut wood with the machete"
                     utsì
               awá
                           ikù
        iywi
Yatye:
               took door shut
        boy
                                   (ibidem)
         "the boy shut the door"
```

This etymology satisfactorily accounts for the two main uses of the prefix *aR- as a transitivization marker of the so-called "ergative" verbs (de Guzman), which include the movement-displacement verbs in the Philippine and Formosan languages:

Examples 9 (Tagalog):

1	AF in -um-	>	AF	in	m-a	g-	PF i	n	i -	RF-LF	in	-an
	l-um-agay "stand someplace"	>	m – 8	ag-1	laga	Y	i-la	ga	y	lagay-	an	"put someplace"
												"hang up (Tr)" "throw"

```
n- ag- sabit siya n- ang kurtina sa bintana
Acc AG hang 3sgSuj Complt Art curtain Prep window
"she hung the curtains on the window" (cf. De Guzman 1978: 207)
(lit.) "she introduced into the situation curtains to hang (to be hung) on the window."
```

The second use is as a detransitivization marker in the Bugis type languages, serving to introduce an object without mentioning it explicitly, see examples under 10.

References:

ADRIANI Nicolaus, 1893. Sangireesche spraakkunst. Leiden, Nederlandsche Bijbel-genootschap.

BARSEL Linda A., 1994. The Verb Morphology of Mori, Sulawesi. Canberra, Pacific Linguistics (B-111).

BLUST Robert A., 2001. Austronesian Comparative Dictionary (version électronique 2001).

DE GUZMAN Videa, 1978. Syntactic Derivation of Tagalog Verbs. Honolulu, The University of Hawaii Press.

DEZ Jacques, 1980. Structures de la langue malgache. Paris, Publications orientalistes de France.

DONOHUE Mark, 1999. A Grammar of Tukang Besi. Berlin-New York, Mouton de Gruyter.

GIVÓN Talmy, 1975. "Serial verbs and syntactic change: Niger-Congo", in Li. Ch. N. (ed.), Word Order and Word Change. Austin, University of Texas Press.

--, 1984-1989. Syntax. A functional-typological Approach, I-II. Amsterdam, Benjamins.

JOSEPHS Lewis S., 1975. Palauan Reference Grammar. Honolulu, the University of Hawaii Press.

--, 1994. Review article of Alain Lemaréchal. 1991. Problèmes de syntagme et de sémantique en Palau. Oceanic Linguistics 33/1, p. 231-255.

LEMARÉCHAL Alain, 1986. "Syntaxe, morphologie et genèse de la forme dite "hypothétique" du palau", Cahiers linguistiques Asie Orientale, 15/1, p. 129-170.

- --, 1991a. Problèmes de sémantique et de syntaxe en Palau, Paris, Editions du CNRS.
- --, 1997a. "Superposition des marques, zéro et morphologisation", in *Mémoires de la SLP* 5 (Nouvelle série), Paris, Klincksieck, p. 25-61.
- --, 1998a. Etudes de morphologie en f(x,...). Paris, Peeters.
- --, 1998b. "Cliticisation vs autonomisation d'affixes: genèse des marques de voix et grammaire comparée des langues austronésiennes", in Cl. Muller (ed.) *Clitiques et cliticisation. Actes de Bordeaux, octobre 1998.* Paris, Honoré Champion, p. 31-46.
- --, 2001. "Problèmes d'analyse des langues de Formose et grammaire comparée des langues austronésiennes". BSLP 96/1, p. 419-480.