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Tenselessness in South American indigenous languages with focus on Ayoreo (Zamuco)

to the memory of Domingo Bulfe

ABSTRACT: After defining the notion of *tenselessness*, the paper presents arguments to treat Ayoreo (with exceedingly poor verbal morphology) as a radical tenseless language. Apart from mood, which is overtly expressed by the *realis* vs. *irrealis* opposition, all possible candidates for the status of temporal-aspectual exponents turn out to be, on closer inspection, no more than adverbial elements, although the Tomaraho dialect of the cognate language Chamacoco might be on the verge of grammaticalizing a temporal morpheme. Next, Ayoreo is compared with other South American indigenous languages which have been pointed out as tenseless (Mueller 2013), suggesting that they show varying degrees of tenselessness without, however, reaching the level of radical tenselessness that characterizes Ayoreo.¹

KEYWORDS: Tense-Aspect; Mood; Tenselessness; South American Indigenous Languages; Zamucoan.

RESUMEN: Después de definir el concepto de *tenselessness* 'atemporalidad', este artículo presenta argumentos para tratar el ayoreo (con morfología verbal altamente pobre) como una lengua totalmente que carece de marcadores de tiempo. Además del modo, que se manifiesta concretamente por la oposición *realis* vs. *irrealis*, todos los posibles candidatos como exponentes temporal-aspectuales resultan, a luz de una inspección más acurada, en no más que elementos adverbiales. Sin embargo, el tomaraho, un dialecto de la lengua chamacoco, estaría al borde de gramaticalizar un morfema temporal. Luego después, se compara el ayoreo con otras lenguas indígenas de América del Sur que han sido caracterizadas como carentes de tiempo gramatical (Mueller 2013), sugiriendo que esas lenguas presentan diversos grados de *tenselessness*, pero sin llegar al nivel de atemporalidad extrema que el ayoreo.

PALABRAS CLAVE: Tempo-Aspecto; Modo; Atemporalidad; Lenguas indígenas sudamericanas; Zamuco.

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Throughout this paper the following ABBREVIATIONS are used: ART = article, ASS = assertion, BF = base form, CLF = classifier, CNJ = conjunct, CNT = continuous, COMP = complementizer, COORD = coordinator, CPTV = completive, DEC = declarative, DEF = definite, DIR = directional, EMPH = emphatic, EVID = evidential, FAC = factual, FS/FP = feminine singular/plural, HAB = habitual, IND = indicative, INDT = indeterminate, IPFV = imperfective, LNK = linking element, LOC = locative, MOD = modal, MS/MP = masculine singular/plural, NMZR = nominalizer, NRLD = non-realized, PERF = perfect, PFV = perfective, PHAT = phatic, PLPF = pluperfect, PRSP = prospective, PTCP = participle, REP = reportative, RTR = retrospective, RFL = reflexive.

1. UNDERSTANDING TENSELESSNES

The notion of ‘tenselessness’ may be read in two different ways, due to the ambiguous meaning of the word ‘tense’, which can designate either (A) the time domain as involved in the so-called TAM (Tense-Aspect-Mood) systems of natural languages, or (B) the specific morphosyntactic devices that convey TAM information. According to reading (A), one can talk, e.g., of the Italian Simple Past as having past-tense_A reference; according to reading (B), one can, more specifically, say that the Simple Past is a tense_B of the Italian TAM system. Precisely to avoid this undesired ambiguity, the present author regularly distinguishes in his writing between ‘temporal reference’ or ‘temporality’ (i.e., tense_A), and ‘tense’ (i.e., tense_B). According to this view, any tense_B is regarded as the composite vehicle of temporal-aspectual-modal values, obviously different from tense_B to tense_B and often from one usage to another within one and the same tense_B. Thus, to continue with the above example, the Italian Simple Past should be regarded as a tense_B conveying the values of past temporal reference, perfective aspect, and indicative (i.e., realis or factual) mood.

Depending on the interpretation that one attaches to the word ‘tenselessness’, an immediate consequence follows. According to reading (A), a language should be regarded as tenseless_A whenever it lacks morphosyntactic exponents to convey temporal values, although it may possess tools to express the remaining components of the TAM system. According to reading (B), by contrast, a language should only be considered tenseless_B if it lacks tenses_B, i.e. if it does not present an articulation whereby different forms build structural oppositions on the basis of contrasting TAM properties. This entails that languages such as Western Greenlandic (Schaer 2004; but see Hayashi & Spreng 2005), Mandarin Chinese (Lin 2010), or Biblical Hebrew and Classical Arabic (Cohen 1989) should be regarded as tenseless_A, but by no means as tenseless_B, for each of them possesses a structured system of oppositions in the domains of aspect and/or mood.²

To avoid confusion, in this paper the notion tenselessness_B will be called ‘radical tenselessness’, although one should take this notion *cum grano salis* for at least two reasons. First, one ought to keep in mind that no language should be thought of as totally lacking any device to express at least the bulk of TAM semantics. For instance, no language lacks temporal adverbs to locate the events on the time axis, nor – although there are exceptions in individual languages – aspectual adverbs of the type ‘still’, ‘already’, ‘habitually’ to convey the most fundamental aspectual values, as well as adverbs to express the basic epistemic and evidential oppositions (like ‘probably’, ‘certainly’, ‘supposedly’, ‘reportedly’). Second, even though a language may lack ways to convey, e.g., temporal and aspectual values, it might nevertheless possess tools to express modal values. Here the convention will be adopted that radical tenselessness is involved whenever a language possesses explicit devices to express no more than one among the three TAM components (temporality, aspect, mood/modality). It is also important to keep in mind that the actual morphological nature of these devices varies from language to language, depending on how tenses_B are implemented: as inflectional morphemes, agglutinated morphemes, or independent particles.

² Indeed, Qiu & Zhou (2012) showed with an ERP experiment that the decoding of temporal information in Mandarin crucially involves the aspectual particles.

The purpose of this paper is to show that Ayoreo belongs to the class of radical tenseless languages. After sketching in §2 the main features of Ayoreo relevant to the present discussion, §3 will reanalyze the data recently discussed in Mueller (2013) concerning a set of South American indigenous languages thought to be tenseless, while §4 will draw some conclusions.

2. AYOREO AS A RADICAL TENSELESS LANGUAGE

Ayoreo is a Zamucoan language spoken in the Gran Chaco territory between Southern Bolivia and Northern Paraguay. The present author, with the collaboration of Luca Ciucci, aims at producing the first scientific grammar of this language. This will be accompanied by the grammar of Chamacoco (the only other extant Zamucoan language, more properly called Ishiro Ahwoso, with the word *Ishiro* designating the people themselves) to be written by Luca Ciucci, who is also working on a grammar of Ancient Zamuco based on the description provided in the first half of the 18th century by the French Flanders Jesuit Ignace Chomé (Lussagnet 1958). At the moment, the only available grammatical description is the sketch offered by Bertinetto (2009), soon to appear in Spanish translation in the third volume of *Lenguas de Bolivia*, edited by Pieter Muysken and Mily Crevels. It is worth noting that the description here provided for Ayoreo with respect to tenselessness extends to Chamacoco as well – at least with respect to the Ebitoso dialect (the one spoken by the majority of the Chamacocos) – with no more than relatively marginal differences concerning the domain of mood/modality (Ciucci 2013).

As shown in Bertinetto (2009), Ayoreo has no system of grammatical tenses_B. The verbal paradigm presents a single form (with full person inflections) in the realis mood and a partly defective form (in terms of person inflections) in the irrealis mood as used in injunctive and hypothetical contexts, and occasionally (in the most conservative variety) in future referring situations interpreted as irrealis contexts. Thus, although the category mood is overtly expressed – and indeed further supported by a neat divide in the complementizers system, mirroring the realis vs. irrealis split by means of *uje* (for temporal and causal clauses) and *ujetiga* (for hypothetical and final clauses) – no overt contrast is expressed with the help of grammatical tenses_B in the domains of temporality and aspect. In addition, Ayoreo presents the modal-epistemic particles *je* and *ja* (about whose textual usage further investigation should be made), plus some evidential particles, like the pervasive *chi* ('shared reported knowledge') frequently uttered in narratives. To mimic the Spanish progressive periphrasis '*estar* + gerund', Ayoreo speakers sporadically, and mostly under elicitation, make use of the emphatic particle *qué* (uttered with strong prominence, as in *QUE tagu* '(s/he) is definitely eating'), which could hardly be considered a grammaticalized construction.³

As for temporality, apart from the universal tendency of telic verbs to suggest (out of context) past/future reference and of atelic verbs to suggest (again out of context) present reference, the speakers occasionally – but far from obligatorily – make use of temporal adverbs, especially when the situational context does not provide sufficient information.

³ The Tomaraho and Ebitoso equivalent of Ayoreo *qué* is *yehe* /*jehel*.

These include, e.g., *dirica* ‘yesterday / a few days ago’ and *dirome* ‘tomorrow / in the next few days’, but in the past domain the choice is sufficiently large to express nuances of temporal distance (cf. *ica*, *icaite*, *icasicaite*, *nanique*, indicating progressively distant temporal stages). The two adverbs that come closer to the condition of grammaticalized particles are *que* (retrospective)⁴ and *jne* (prospective), optionally used to disambiguate the temporal interpretation:

(1) Ayoreo (Zamuco)

a. Chi acote chi ch-ise yocade iguijnai *que*, mu chi tiritá.
 EVID wife EVID 3-find turtles house *RTR* but EVID empty
 Anirengo ch-uje di(rica).
 some.PL 3-kill yesterday
 ‘A woman found a turtle’s hole, but it was empty. Someone had previously captured (the animals).’ [tale from fieldwork]

b. “Ureja cha, je boyo yi-co ga ñ-iso-cōi datatōra,
 Ureja PHAT MOD 2P.IRR.GO 1PL-go COORD 1-collect-1PL out_there
 y-a-jo yoqu-i-tigo yoca to *jne*.”
 1-eat-1PL 1PL-haul.CLF-INDT.MP turtle also *PRSP*
 “‘Ureja, let us go and collect, we (shall) eat our turtles.’” [tale from fieldwork]

This is a point that deserves careful consideration, for according to the short grammatical description by Morarie (1980), a North American missionary of the New Tribes Mission organization, *que* and *jne* should be considered as giving rise to fully-fledged tenses (past and future, respectively). Incidentally, in his grammar of Ancient Zamuco Ignace Chomé indicated a rich paradigm of tenses clearly modeled on Latin, but it is easy to show that, despite the undoubted merits of this extraordinary *savant*, he simply misinterpreted as verbal inflections a number of adverbial elements. The position suggested by Morarie (1980) has also been recently adopted by Tracey Carro Noya in unpublished work concerning the Tomaraho dialect of Chamacoco (the other dialect is known as Ebitoso, as mentioned above). According to Carro Noya, Tomaraho might be on the verge of grammaticalizing a set of temporal and aspectual markers. Most of these bear resemblance (in some cases even phonetically) to the above mentioned Ayoreo adverbs: *hnaga* is the equivalent of *dirica* ‘yesterday’, *kyche* of *icaite* ‘long time ago/before’, *jehe* of the emphatic particle *qué* (see fn. 3). The morpheme *ehn* is supposed to indicate past imperfectivity, but the examples reported by Carro Noya are compatible with the possibility of its simply being a past reference adverb meaning ‘then’ (roughly equivalent to Ayoreo *jecuje*, i.e. *jec u uje* ‘so (it) is that’), with the imperfective nuance provided for

⁴ Temporal *que* [ke] is homophonous with the negation *que* and with the emphatic particle *qué* (carrying strong prominence); see example (8), where all three adverbs appear in one and the same sentence. This complicates at times the decision as for the actual interpretation. It is worth noting that *que* (in all of its meanings) is optionally realized as [he].

free by the atelic nature of the predicates involved (cf. *Ehn niogyt kys hnaga* [EHN water cold yesterday] ‘Last time the water was cold [with implicit copula]’).^{5,6}

The only morpheme which might really show an incipient grammaticalization stage is the enclitic =*ke*, obviously reminiscent of the Ayoreo temporal adverb *que*.⁷ Judging from the examples provided by Carro Noya, =*ke* is always found immediately attached to a verb, possibly the last in a serial verb construction, as in *eldei takaha texyr=ke* [morning 1SG.go 1SG.fish=KE] ‘This morning I went fishing’. This is admittedly different from what one observes in Ayoreo, where *que* is often found at the end of the clause at some distance from the predicate, as in (1a). Actually, when a Tomaraho verb governs an object, the past marker attaches to it rather than to the verb (Carro Noya, p.c.), but this does not contradict the strict VP-adjacency of =*ke*. Thus, although Tomaraho has not gone far in the process of grammaticalizing fully-fledged TAM morphemes, one has to concede that it is possibly one step ahead with respect to Ayoreo or the Ebitoso dialect of Chamacoco (where =*ke* is usually found at the end of the clause).⁸ But is this enough to conclude that Ayoreo is a radical tenseless language?

In order to answer this question, one should first dismiss the possible pseudo-argument based on the optionality of the Ayoreo (and, for that matter, Tomaraho) temporal adverbs/particles. To understand this, one can consider the case of Moore, a Gur language mostly spoken in Burkina Faso (Bertinetto & Pacmogda 2013). The Moore verbal system presents both purely aspectual suffixes undergoing subtle morphophonological

⁵ This example presents two temporal adverbs. If they are indeed TAM markers, one should investigate the reason of their coexistence. It is however reasonable to assume that the speaker simply felt the need to narrow down the temporal localization of the event by adding a deictically oriented adverb, indicating short temporal distance from the speech time.

⁶ It is worth noting that in Ebitoso *ehn* is a temporal subordinator, also to be found in combination with *uhe* ‘when’. As for past-reference, Ebitoso presents the following series of adverbs corresponding to increasing temporal distance: =*ke*, =*hna*, =*ni*, =*kite* (Luca Ciucci, p.c.). In addition, the Ebitoso equivalent of the Ayoreo prospective *jne* is *nehe* (just as in Tomaraho; Carro Noya, p.c.). As Luca Ciucci suggests, one cannot exclude a remote connection of this temporal particle with the future reference affix *-ne / -nehe* to be found in various Guarani languages, like: Tembé *-nehé* (Dietrich 1990: 69), Guajajára *-nehe* (Jensen 1998: 553), Emétilon and Bolivian Chaco Guarani (i.e., Chiriguano) *-ne* (Dietrich 1990: 70,95; Bertinetto 2006).

⁷ Tomaraho (and Ebitoso) =*ke* and Ayoreo *que* are homophonous, despite the spelling difference merely due to different transcription conventions. Actually, for both Ayoreo and Chamacoco there are competing writing conventions. Suffice it to say that, in the quotations reported here, the grapheme <j> stands for [h] in Ayoreo and for [j] in the Tomaraho orthography adopted by Carro Noya. As for Ayoreo <jn, jm, jñ> and Chamacoco <hn, hm>, they stand for the corresponding voiceless nasals, with variable pronunciation (Bertinetto et al. 2010). Apart from these orthographic details, the marker *que/=ke* (as pointed out by Fabre, p.c.) bears striking and highly suggestive phonetic resemblance with suffixes present in Guaykuran and Mataguyan languages, all spoken in the Chaco area and to be regarded as tenseless_A. These are known for their directional/locative suffixes giving rise to contextual TAM nuances (Vidal 2006). Of special interest here is the resemblance with the Nivaclé “associated motion suffix, itive (going away from deictic centre) *-ch'e/-qu'e*”, about which Fabre (unpublished) notes that it “often induces a past reading, although it is not by itself a past morpheme”, further adding that it “corresponds to Wichí *-che/-k'e*, Chorote *-k'i* and Maká *-k'i*. At least Wichí appears to have the same use [as Nivaclé]”.

⁸ It is fair to say that Carro Noya herself is very cautious in this respect. Quoting from a personal communication: “I am not claiming that all the markers I mentioned (*hnaga*, *kycbe*, *ehn*, *jehe*, *ke*) are indeed part of a grammaticalized set of temporal and aspectual markers. What I wanted to point out is that, in my opinion, these items show in Tomaraho some characteristics that make them candidates to be considered as somewhat more grammaticalized than other adverbial expressions in the language. Another possibility that I would like to investigate further is to see them as adverbs/particles with a more ‘specialized’ function in discourse.”

processes, and preverbal temporal and modal particles, supposedly derived from adverbs or verbs. The lack of morphological coalescence of the latter morphemes suggests that they belong to a later stage of grammaticalization. This allows for the speculation that, at a previous stage, Moore might have been a purely aspectual language, perhaps even a radical tenseless language where temporality and modality had no morphosyntactic exponence. What is of interest in the present context is the fact that the preverbal particles – at least those that convey pure temporal (as opposed to modal) meaning – may be optionally omitted. This often occurs in narratives, where the temporal particles are only provided by the speaker when s/he feels the need to indicate the temporal localization of the event, as otherwise the context does the work. This is obviously different from what one observes, e.g., with the English past tense morpheme *-ed* (and allomorphs), which could not possibly be stripped off without affecting the intended meaning. Despite this, it is legitimate to consider the Moore optional preverbal particles as perfectly grammaticalized devices for at least the following two reasons. First, they are strictly adjacent to the verb, with very few possibilities of intermission (typically including the linking element *n*). This suggests the hypothesis that at least some of them might have arisen from verbs introducing a serial verb construction, a well-attested syntactic type in Moore. Whatever the case, it is obvious that the strictly preverbal position is a strong indication of their high degree of grammaticalization as TAM exponents. Second, they can combine according to rigidly specifiable criteria in order to give rise to structured temporal and modal values. For instance, the counterfactual tense_B is formed by combining a retrospective and a prospective marker:

(2) Moore (Gur)

séooog-ã	rá	ná	n	yì-t	sóamá
winter-DEF	RTR	PRSP	LNK	be.PFV-ASS	well

‘Winter might have been good.’

This proves that the Moore temporal/modal particles give rise to fully-fledged tenses_B. When the purely temporal particles are omitted, the speaker can easily recover the contextually elided element, thus construing the implicit tense_B meaning. Ayoreo ostensibly falls short of this. Not only are there no grammaticalized adverb/particle combinations (as for Tomaraho, cf. fn. 5), but even the syntactic position of *que* and *jne* – the only possible candidates for the status of TAM particles – is far from strictly regulated. In order to substantiate this point, careful inspection was carried out of the spoken texts directly collected or obtained by the present author, excluding any edited text in order to overcome linguistic contamination.⁹ To start with, a quantitative datum: in a sequence

⁹ Needless to say, this is mere methodological precaution and should not be read as a sort of criticism against those who have dealt with this language in the past. In particular, the contribution to the understanding of Ayoreo provided by the New Tribes missionaries is invaluable, witness their detailed dictionary (Higham A., Morarie M., Paul G. (2000) *Ayoré-English dictionary*; Sanford, FL.: New Tribes Mission; the Spanish version will soon be available on the web). Also useful, although less accurate, is the dictionary by Barrios A., Bulfe D., Zanardini J. (1995), *Ecos de la selva. Ayoreode Uruode*, Asunción: Centro de Estudios Antropológicos de la Universidad Católica.

of approximately 2100 words, corresponding to 514 clauses (more precisely, predicative nuclei, including those with implicit copula), extracted from the memories of the old chief Samane (kindly offered to this author by the anthropologist Jürgen Riester), there are 30 instances of negative *que*, 2 of retrospective *que*, 1 of emphatic *qué*, and 4 of prospective *jne*. Although the paucity of prospective markers is expected in a narrative text (indeed, the only occurrences are included in direct speech passages), the paucity of retrospective *que* can only be understood in relation to the presence of alternative ways of expressing past reference by means of other past referring adverbs (*icaite*, *nanique* etc.). This is a first hint that at least *que* is far from grammaticalized as a strictly morphological marker.¹⁰

To supposedly strengthen this point, one might easily quote passages where *que* and *jne* accompany just one clause nucleus, to the exclusion of others, within the same sentence. This, however, might be intended as a sort of parsimonious usage reminiscent of the Moore particles omission pointed out above. Let us consider rather the syntactic position of these supposed TAM markers. As it happens, besides a number of cases where they occupy the final position within the clause – possibly followed by other strictly clause-final morphemes – as shown in (1), one can easily detect different syntactic positions, as in the following examples:

(3) Ayoreo (Zamuco)

Nga	chi	ore	ch-ayo	jõroque	chequedie	ore,	a	(u)ñeque
COORD	EVID	3.PL	3-run	in_vain	women	3.PL	MOD	somebody
ch-aru	gari	<i>que</i>	iji	sañeque,	guede	garani	(u)ñeque.	
3-burn	over	RTR	ADPOS	somewhere	sun	origin	somebody	

‘And the women ran in vain, somebody had put fire somewhere, somebody towards the east.’
[tale from fieldwork]

(4) Ayoreo (Zamuco)

“Choqui	ja,	be	ba-soca-rique	a,	uje	gajño	deji	uti
man	MOD	2.get.IRR	2.manner.INDT	MOD	COMP	swamp	3.exist	there
<i>que</i>	anire	dajei	garani	tuque		ejai.”		
RTR	PHAT	path	origin	that.already_mentioned		side		

“‘Man, do something [lit., get some manner of yours], because there was a swamp there in the direction of that (previously mentioned) path’”. [tale from fieldwork]

(5) Ayoreo (Zamuco)

“Date_code	a,	a-pesu	y-ogue_pare-raque	enga	ñ-ijnina
grand-mother	MOD	2.IRR-get	1-club_for_hunting-INDET	COORD	1-carry
ore to	<i>jne</i>	aja	ñacorenie.”		
3PL	also	PRSP	ADPOS	wild_pigs	

“Grand-mother, make (for me) hunting-club(s) and I shall carry them for (getting) wild pigs.” [tale from fieldwork]

¹⁰ The comparison with Tomaraho is interesting in this respect. In a spontaneous text of about 1300 words, one finds 23 instances of =*ke*; perhaps not “of great statistical significance but [...] nevertheless a much higher figure than in Ayoreo” (Carro Noya, p.c.).

- (6) Chi ch-ojninga: “Boyo yi-co *jne* ome d-ojode jnania.”
 MOD 3-say 2P.IRR.GO 1PL-go PRSP ADPOS RFL-fellows.CLF men.BF¹¹
 He said: “Let’s go with his friends!” [tale from fieldwork]

In (3), *que* clearly indicates a previous time stage, similarly to adverbs such as *before* and *previously*, although the translation given makes use of the pluperfect, exploiting the possibilities offered by English morphosyntax. As for (6), it features the irrealis mood in its exhortative function accompanied by the prospective marker. Although this is not the only example of its sort, it will not go unnoticed that the temporal meaning of *jne* is redundant in such cases, for the exhortative has in and by itself prospective reference. In other words, while *jne* is often absent in future referring contexts (just as *que* is, in past referring ones), it is sometimes found in contexts where one would not expect it, if it were a true TAM exponent. One can thus hardly escape the conclusion that these two markers, lacking a fixed syntactic position and simply being used to reinforce (sometimes even redundantly) the temporal interpretation of the utterance, are not part of a paradigm of grammatical tenses,^b but rather preserve their adverbial character. This is further confirmed by the following example, where *jne* collocates with a (contextually) past-referring verb, merely designating a later temporal stage (rendered as ‘next’ in the translation) rather than giving rise to a fully-fledged future tense:

(7) Ayoreo (Zamuco)

- Nga jnani tude chi tibidi d-aro ñaque *jne* jetiga tibagui,
 COORD man that EVID 3.call RFL-daughter other.FS PRSP COMP 3.accompany
 tibagui ape baje uje ch-oji najnai gari.
 3.accompany sister first COMP 3-drink shaman over
 ‘But, *next*, that man called one of his daughters so that she (would) accompany ...
 accompany her elderly sister who had married the shaman.’ [tale from fieldwork]

It would be wrong to convey the impression that *que* and *jne* do not obey any kind of syntactic constraint, for they can only be found postverbally. However, this could hardly be considered proof of their grammaticalization as TAM markers, as adverbs in general often obey positional restrictions (Cinque 1999). This constraint is especially relevant for *que*, because of its possible confusion with the negation and the emphatic particle. The following example shows the three elements in one and the same context:

(8) Ayoreo (Zamuco)

- Nga *que* cucha pibo-tique, e *qué* ch-ijnaque yu; a
 COORD NEG thing food-INDT already EMPH 3.give 1s MOD
 y-acai degúi *que* enga ore ch-isi yu iji cuterone bisidecho.
 1s-stay camp RTR COORD 3P 3-give 1s ADPOS honey.PL for_free.BF.MP
 ‘And I did not have any food, but they did give it to me; I stayed in the camp (then)
 and they offered me honey for free.’ [Samane’s memories]

¹¹ As for the meaning of “base form”, cf. Bertinetto (2009).

An inspection of the syntactic position of Ayoreo localizing temporal adverbs revealed that they are all invariably postverbal and often clause-final. The only temporal adverbs which can be preverbal (and, indeed, in most cases are) are the non-localizing ones, such as *jecucha* ‘always’. One can thus conclude that Ayoreo *que* and *jne* behave like any other localizing temporal adverb of the language and thus do not show any detectable sign of grammaticalization as TAM markers.

Interestingly, the Ebitoso situation (Ciucci, p.c.) seems to be intermediate between that of Tomaraho and Ayoreo. As in Tomaraho, Ebitoso =*ke* and *nehe* tend to occur relatively more often than their Ayoreo cognates (although far from regularly), and they are not infrequently found verb-adjacently. However, their syntactic position enjoys a larger degree of freedom with respect to Tomaraho: for instance, they can precede the direct object, rather than systematically follow it. In addition, these adverbs can also attach to temporal adverbial phrases, as in: *dihlak-i=ke* [night-LNK=ke] ‘on that night’, *deeych yeêk nehe* [day other NEHE] ‘in some later day’ (whether this also happens in Tomaraho is not known to this author). Besides, one can even find locutions such as *esee=ke* [then=ke], roughly corresponding to ‘on that occasion’, where =*ke* cliticizes to a discourse marker. Thus, the behavior of Ebitoso =*ke* and *nehe* seems to differ from that of Ayoreo *que* and *jne*. However, it should be noted that the Ebitoso retrospective clitics =*hna*, =*ni*, and =*kite* – indicating progressively larger temporal distance as compared with =*ke* – occupy exactly the same syntactic positions as =*ke* and *nehe*. Thus, unless one wants to defend the implausible claim that all these time-localizing clitics show an incipient grammaticalization stage as TAM markers, one should admit that their purely adverbial nature extends to =*ke* and *nehe*, as suggested by the fact that the relatively free syntactic position of the latter clitics is shared by the whole set.

3. TENSELESSNESS IN SOUTH AMERICAN INDIGENOUS LANGUAGES

It is worth comparing the Ayoreo situation with that of other South American indigenous languages considered to be tenseless. In a very useful survey, Mueller (2013) lists 9 tenseless languages out of her balanced sample of 63, which shows that this grammatical feature is robustly represented among the languages of this part of the world and, interestingly, spread all over the South American continent. Of these, six are considered to be perfectly convincing examples – Baure (Arawakan), Mocoví and Pilagá (Guaykuruan), Nasa Yuwe (a.k.a. Paez, Paezan), Tsafiki (a.k.a. Colorado, Barbacoan), Yanam (Yanomamam) – while the remaining three are regarded as borderline cases: Mapuche (or rather Mapudungun, Araucanian), Trumai and Urarina (both unclassified). Mueller adds that while “[...] some languages are completely tenseless, many South American indigenous languages actually are partially tenseless. They may mark tense_[A] (obligatorily or not), but still allow for constructions that do not have tense_[A] marking.” (p.35).¹² The examples quoted are Wari’ (Chapacuran), Jarawara (Arawan), Cavineña (Tacanan)¹³.

¹² The index added to the word ‘tense’ in this quotation and in those to be reported below are obviously due to the present author (see §1). No index will be added when the exact meaning of this term is impossible to determine.

¹³ As for Cavineña, Guillaume (2008:179ff) observes that TAM markers are often omitted when the context makes the interpretation sufficiently clear.

In the remainder of this section, only the nine previously mentioned languages will be examined. The purpose is to ascertain to what extent their TAM systems qualify as tenseless. Rather than following Mueller's division of prototypical vs. borderline cases, the 9 languages will be divided into three groups according to a criterion of broad structural similarity, devoting §3.1 to agglutinating languages, §3.2 to polysynthetic languages, and §3.3 to Tsakifi with its peculiar syntagmatic verb structure. The purpose is to analyze them in the light of the definition of tenselessness provided in §1.

As a general observation, all nine languages present a rich array of modal and evidential markers. The latter, more so than the former, frequently support future-reference readings. Apart from such usages, the modality markers will be ignored. Suffice it to say that all these languages, like indeed the South American indigenous languages as a whole, should be regarded as 'mood-prominent' according to Bhat (1999). This implies – given the definition in §1 – that in order for the nine candidates proposed by Mueller to qualify as radical tenseless languages, they should present no morphosyntactic exponent for both temporality and aspect. Needless to say, they might alternatively qualify as tenseless_A in case only temporality, to the exclusion of aspect (besides of course modality), lacks overt manifestation (see § 1).

Obeying a tendency also detectable in other parts of the world (e.g., in Creole languages, to quote a well-known case), the dynamic verbs of the nine mentioned languages tend to have, out of context, present reference in conjunction with imperfective morphemes and past reference in conjunction with perfective morphemes. Equally common to the sample, and widespread in South American indigenous languages, is the tendency of perfectivity to be expressed by the \emptyset -morpheme, in contrast to the explicit manifestation of imperfectivity. Further indication of this is the fact that there is often a multiplicity of imperfective markers, whereas the perfective ones may sometimes consist of no more than the \emptyset -marked exponent. This suggests that in these languages aspect has been grammaticalized by gradually incorporating morphemes that convey different imperfective nuances, while the absence of aspectual exponence has turned into the most conspicuous – although often not the only – marker of perfectivity.

A feature that stands out in some of the languages under examination is the presence of locative/positional and directional markers. This is particularly evident in the two Guaykuran languages (Mocoví and Pilagá). These morphemes may be exploited for the purpose of conveying aspectual meanings, giving rise to grammaticalized constructions as in Nasa Yuwe (see below), although this is not always the case. For instance, in Baure (Danielsen 2007: 265) there are affixes to express the notion of deictic motion towards/from the speaker, conveying purely spatial information. In any case, Vidal (2006) for Pilagá and Fabre (unpublished) for Nivaclé (Matacoan) explicitly mention the emergence of aspectual and temporal oppositions by means of locatives and directionals, so that one cannot exclude that they should be considered as grammaticalized TAM exponents in at least some languages of the Chaco area.

In connection with Chaco, it will not go unnoticed that two out of the nine radical-tenselessness candidates are spoken in this territory, just like the Zamucoan languages described in §2. This will ring a bell for those who consider Chaco as a linguistic area in the proper sense. Comrie et al. (2010) listed a number of features relevant to this characterization, although not one of them is present in all Chaco languages. Among the

phonological features, they cite: the presence of postvelar segments, lateral segments and aspirated allophones of stops and affricates; the opposition between unvoiced and ejective obstruents; and the tendency to palatalize alveolar and velar segments. The morphological features include: elaborate deictic systems; possessive affixes; possessive classifiers (a feature also singled out by Fabre 2007 and Campbell & Grondona 2012); and the alienable vs. inalienable opposition (perhaps better called possessable vs. non-possessable; see Fabre 2007). To these features one might add the syntactic feature of para-hypotaxis (Bertinetto & Ciucci 2012) plus, of course, tenselessness, as also pointed out by an anonymous reviewer.¹⁴ It must in fairness be observed, though, that not all scholars agree on this characterization of the Chaco territory: see Campbell & Grondona (2012) for a different view. The present author would like to adopt a cautious position in this respect: there is no doubt that the Chaco languages share a number of fairly uncommon features which are likely evidence of local linguistic contact, but at the same time one should observe that some of the above mentioned features, including tenselessness, are also present outside of this area. For instance, Bertinetto & Ciucci (2012) observed that para-hypotaxis can also be detected in the Peruvian language Iquito (Zaparoan). Future research will help rank the available evidence for areality, from the most to the least compelling.

Finally, it is worth mentioning the syntactic position of TAM markers as a relevant descriptive parameter. As the examples in the following sections will show, the markers may be verb-internal (affixes) or verb-external (particles). The latter can be found inside or outside the VP (like the two aspectual markers *le* in Mandarin). The farther from the verb the relevant markers sit, the higher the probability that the language be classified as tenseless.

3.1. Mocoví, Pilagá, Yanam, Trumai, Nasa Yuwe

Besides locatives and directionals, as just mentioned, Mocoví exhibits no less than two imperfective markers, called ‘durative’ and ‘progressive’ (Grondona 1998: 198; Gualdieri 1998: 249f). As for Pilagá, after noting that “tense as a category is not morphologically indicated” (p.228), Vidal (2001) lists a number of aspectual markers (some of which are claimed [p.281] to have a transparent origin as locatives/directionals): ‘durative’ (p. 262f), expressing iterativity and present-referring habituality; ‘habitual’ (p. 268f), expressing habitual aspect without temporal restrictions; ‘progressive’ (p. 265-6; 270), expressing progressive aspect, unsurprisingly to the exclusion of permanent stative predicates. In addition, Pilagá presents two affixes, called ‘completive’ and ‘resultative’ (p. 274f), which subtly interact with the actional nature of the predicate, for instance turning an atelic predicate into a telic one (p. 277).¹⁵ Judging from the examples, it appears that in a number of cases the completive marker brings about past reference:

¹⁴ The same reviewer remarks that Guaykuruan and Mataguayan languages (except Wichí, which has developed a future morpheme and three past ones) “also rely on deictic articles to give some (rough) cues as to the intended timing of the state of affairs involved.” This deserves further inquiry.

¹⁵ As Vidal observes: “[...] the specific meaning that emerges seems to be based on the semantic content of the verb plus affix. The reason why some verbs have grammaticized to select one particular allomorph is unknown for the moment.” (p.274).

(9) Pilagá (Guaykuran) (Vidal 2001: 277, ex. 47c-d)

- a. ya-saʃak haso' pelota
 1s-throw FEM.CLF ball
 'He throws / is throwing the ball.'
- b. ya-saʃa-yi haso' pelota
 1s-throw-CPTV FEM.CLF ball
 'He threw a ball.'

However, as pointed out by an anonymous reviewer, (9b) has been reanalyzed in Vidal (2006, p.103) as yielding telicity, with no temporal reference change with respect to (9a). Presumably, this corresponds to: 'throw something to and fro (to somebody, e.g. in a ball game)' vs. 'throw something once (to somebody or simply away from the agent)'. Whatever the case, Mocoví and Pilagá are at best instances of tenseless_A languages as, in addition to modal markers, they exhibit fully grammaticalized aspectual exponents.

A similar case is Yanam, about which Gomez (1990: 93) writes:

Temporal reference in Yanam is expressed by a combination of aspectual morphemes, temporal adverbs, and the context. Pure tense is not unequivocally expressed by verb forms. [...] The aspect distinctions proposed for Yanam are prospective, perfective, imperfective, resultative, ingressive, causative, existential, iterative, and terminative.

The list is fairly heterogeneous, including – besides truly aspectual morphemes – a derivational, valence-changing affix (causative), two 'phasal' affixes (ingressive, terminative) and an affix (existential) clearly showing the agglutinative nature of the language. Although the proposed interpretation of the individual morphemes should be taken with caution (as, in particular, the translations provided for the resultative affix suggest [p.95]), there is little doubt that aspect is highly grammaticalized in Yanam and is exploited for temporal interpretation. Besides, the prospective yields proximative meaning, indicating that the category of 'temporal distance' has found its place in the grammar.

Next, consider Trumai; as Guirardello (1999: 98) puts it:

There are no tense-aspect-mood affixes. Tense_[A] is expressed through the use of adverbs or the two Focus/Tense_[A] particles *ka in* and *chĩ in*, whose primary function is to highlight important information: *ka in* highlights information in events happening now or in recent past, *chĩ in* in events that happened in the past. When a clause has neither adverbs nor the Focus/Tense_[A] particles, tense_[A] is understood from context. Aspect and mood are expressed via auxiliaries.

Thus, although there are no TAM affixes in general, the language presents two particles with obvious temporal interpretation. Nevertheless, Mueller correctly considers Trumai no more than a borderline case, for the focus particles only appear when there are pragmatic reasons for their use. However, the picture would hardly be complete without considering the 'nominal tense' morpheme *t'(a)* (p.100f; Guirardello, however, does not use this term), yielding past reference with nouns and adjectives, and giving rise to the equivalent of a perfective participle with implicit past reference with transitive verbs, as in:

(10) Trumai (unclassified)

<i>mapa</i>	‘break’	<i>mapa-t’</i>	‘broken’
<i>pudits</i>	‘like’	<i>pudits-t’a</i>	‘liked’
<i>chuda</i>	‘make’	<i>chuda-t’</i>	‘made’

In addition, Trumai presents the particle *de* – translated as ‘already’ and interpreted as an auxiliary by Guirardello (p.132f) – which seems to express completion in a way that is reminiscent of the perfect aspect, with its obvious entailments of retrospective reference.

According to Jung (2000: 60), Nasa Yuwe

no tiene una categoría tiempo – excepto el tiempo relativo – aunque determinadas combinaciones aspecto-modo se pueden interpretar también plausiblemente en los correspondientes contextos como tiempo. [...] Si uno se apoya en el contexto lingüístico y extralingüístico, la forma verbal completa puede situarse en la mayoría de las veces también en un eje temporal; esto, por sí sólo, sin embargo, no justifica aún una categorización como tiempo.

Some of the aspect and mood markers are manifested in affixes (imperfective, progressive, habitual, plus the Ø-marked perfective), others by periphrases based on positional verbs (‘durative’ and ‘perfect’ [p. 63; 143]). Actually, the imperfective marker – consisting in a vowel whose quality depends on the preceding consonant(s) – is only visible in consonant-ending roots, otherwise it is only detectable through affix co-occurrence rules (p. 68). One must note that the progressive and habitual (called ‘habitativo’ by Jung) affixes obligatorily cooccur with the imperfective marker (when visible), which suggests that they were introduced at a later stage in order to qualify the type of imperfective view, similar to what the progressive and habitual periphrases do in, e.g., Spanish, despite the existence of tenses that can convey all sorts of imperfective nuances on their own:

(11) Nasa Yuwe (Paezan) (Jung 2008: 68, ex. 34)

<i>skwela-na-tʃ</i>	<i>uʔx-we-ʔ</i>
school-LOC-FAC.3P	go-IPFV-HAB
‘They go to school [i.e., habitually].’	

Supposedly, the second cycle of imperfective markers is sufficiently old for the habitual to have undergone semantic erosion, and this justifies the emergence of the third cycle represented by the already mentioned periphrases. With respect to them, the examples reported suggest the hypothesis (although Jung does not make this claim) that the two positional auxiliaries of the durative yield alternative meanings: true progressive with *uʔp* ‘sit’ and ‘gnomic’ imperfectivity with *ũs* ‘stay’ (p.69-71):¹⁶

¹⁶ By ‘gnomic imperfectivity’, Bertinetto & Lenci (2012) designate the range of imperfective readings found in habitual, attitudinal, and generic sentences, as well as sentences based on I(individual)-level predicates.

(12) Nasa Yuwe (Paezan) (Jung 2000: 71, ex. 52-53)

a.	jaʔxa	um-na	uʔp-t ^h u
	jigra	weave-IPFV.PTCP	sit-DEC.1s
	‘I am weaving bags / a bag.’		
b.	wala	mxĩ-na	ũs-aʔ
	much	work-IPFV.PTCP	stay-DEC.3s
	‘S/he works a lot.’		

Of special interest for the problem at hand are the morphemes of ‘*tiempo relativo*’ (p.85; 93ss) and ‘*pasado remoto*’ (p.94). Interestingly, the former is based on the vowel /i/ and the latter on /u/, which gives them a flavor reminiscent of full-fledged tense_B in fusional languages, despite the essentially agglutinating morphology of Nasa Yuwe. According to Jung, the ‘*tiempo relativo*’ conveys the meaning of recent past in main clauses, while in dependent clauses “establece una relación temporal, pero no con el momento en que se habla [...] sino en relación con un punto temporal que se aclara en el contexto” (p.93). Summing up, Nasa Yuwe exhibits not only a rich array of aspectual morphemes which indirectly provide temporal information,¹⁷ but even morphemes with clear temporal meaning (*tiempo relativo*, *tiempo remoto*). Although one cannot ignore Jung’s statement concerning the fundamentally tenseless_A nature of this language, in terms of typological assessment one might better include it among the borderline cases, rather than among the prototypical ones as suggested by Mueller (2013).

3.2. Baure, Urarina, Mapudungun

Although genetically unrelated, Baure, Urarina and Mapudungun have one thing in common: they are polysynthetic languages with an extremely complicated verb structure, based on a huge number of affix-slots (well over 20) with rigid co-occurrence rules. Some of these morphemes would appear, in the most studied languages, as adverbs or light verbs belonging to periphrastic constructions.¹⁸ It is thus evident that the very notion of tense_B should be correspondingly reinterpreted in such cases, for the predicate should not be seen as the mere site of TAM markers, but rather of a whole range of elements performing a number of diverse morphosyntactic functions. The following discussion will, of course, merely target the TAM elements.

Among the affixes of Baure, some appear to modify the lexical meaning of the predicate, rather than contributing TAM information. Unsurprisingly, most aspectual morphemes are placed in the most external tier of the three (i.e.: root, stem, base) individuated by Danielsen (2007: 217f; 237f), although some aspectual morphemes, presumably older, occupy more internal slots. This is definitely the case of the ‘durative’ affix *-i-* which seems to convey general imperfective meaning (p. 232). Among the

¹⁷ Remarkably, Nasa Yuwe (p.66) presents two different imperfective affixes to be used with some motion verbs, respectively designating directed and non-directed motion. This obviously reminds of Russian.

¹⁸ See also the remark made above concerning the existential affix of Yanam.

most external morphemes, the ‘change of state’ affix, translated as ‘already’, conveys a perfect-like meaning (p. 255), while the ‘copula’ affix indicates progressivity, except that with telic verbs it indicates completion. Although at first sight bizarre, this behavior has been detected in other languages all over the world (Ebert 1995), so that it should be understood as obeying some deeply-rooted cognitive principle. Disregarding other morphemes, such as the rather mysterious ‘perfective and reflexive’ affix (p. 262-3), it is worth considering the ‘intentional’ affix *-pa-*, transparently meaning ‘go’, which “can be regarded as marking a kind of future, although there is actually no tense marking in Baure. [... the ‘intentional’ affix] can also be found with past reference where it expresses a future relative to another event” (p. 264).

This is thus another case where, unsurprisingly, prospective reference is conveyed by a modal element, and this is further confirmed by the ‘irrealis’ affix, which can convey the meaning of uncertain future (p. 267).

Besides its many affixes, Baure also presents particles – obviously belonging to a more recent grammatical layer – some of which convey aspectual/temporal meaning. Actually, the ‘perfect’ particle *ver* (p. 272f) is homophonous with the adverb ‘already’; but to the extent that it can be distinguished from it, it seems to convey pure temporal information (rather than the aspectual notion of perfect) in examples such as:¹⁹

(13) Baure (Arawakan) (Danielsen 2007: 275, ex. 23)

<i>ver</i>	<i>eto=vi</i>	<i>to</i>	<i>vi=širiko-č</i>	<i>ver</i>	<i>kač</i>	<i>v=eh-p-a-pa</i>
PERF	finish-1P	ART	1P=grate-NMZR	PERF	DIR	1P=wash-CLF-LNK-DIR
<i>to</i>	<i>etip</i>					
ART	manioc.starch					

‘When we finished grating (manioc), (then) we started to wash the starch out.’

If one also considers the existence of the progressive particle *ito* (connected to *-ito/-ita* ‘continue’), one can hardly escape the conclusion that Baure qualifies at best as a tenseless_A language, for it possesses a remarkable number of aspectual and modal markers which can supply temporal meaning in the appropriate contexts.

In the words of Olawsky (2006), Urarina

[...] does not have any formal marking explicitly used for tense_[A]. For instance, the remoteness marker *=te* is usually used with past reference, but it can also refer to remote future [...]. Future tense_[B2] is a construct of the irrealis marker *-ri-* and the assertive enclitic *=ni-*.” (p. 481). [...] the assertive appears to validate an assumption expressed through the irrealis, indicating that the possible outcome of an event [i.e., a future event] is certain or very likely to be realized” (p. 494).

Apparently, the ‘remoteness’ marker expresses the notion of ‘temporal distance’ rather than temporality. But apart from this, in Urarina “the imperfective is split in various forms: the continuous/durative *-ahe-* (and allomorphs), the past habitual *-rehet-*, and the habitual form *-nahaaka-*.” (p. 462). The ‘continuous/durative’ and the ‘habitual’ may coexist, giving rise to combinations such as:

¹⁹ Should one interpret *ver* as a perfect marker, the following reading would obtain: ‘We had (already) finished grating (manioc), (then) we started to wash the starch out’.

(14) Urarina (unclassified) (Olawsky 2006: 464, ex. 676a)

obana su-ahe-reheto-a
 CLF.peccary kill-CNT-HAB-3P/A
 ‘He used to be killing peccaries.’

At first sight, the two habitual markers incorporate the notion of ‘temporality’, but this is only true for *-nahaoka-*, because the so-called ‘past habitual’ *-reheto-* is in fact a remoteness marker which can also designate a distant future habit (p. 465).

Finally, Urarina has the ‘completive’ suffix *-si*, indicating completion with respect to a given reference time, thus expressing the meaning of a perfect. Whether or not this should be regarded as a true tense_B, namely as an organic TAM form conveying aspectual information while remaining parasitic on context as for its temporal interpretation, is difficult to say. Whatever the case, one could hardly disagree with Mueller’s suggestion to regard Urarina as a borderline example.

Mapudungun is a rather intricate topic. The descriptions available for this language (sometimes wrongly referred to by what is in fact the name of the people, namely Mapuche) disagree on crucial details, and the picture is further complicated by the fact that Smeets (2008) neglects the divide between actionality and aspect, so that it is hard to understand what is due to one component as opposed to the other. Some supposedly imperfective markers, in fact, seem to have the purpose of turning dynamic verbs into stative ones. Fortunately, both Golluscio (1998) and Zúñiga (2001) explicitly rely on the actionality vs. aspect opposition, although with partly diverging results. As Zúñiga observes (p. 79), one and the same affix may yield different interpretations with different verb types.

Smeets (2008), who also offers etymological insights for most of the TAM affixes (170-3), describes a ‘constant state’ affix which seems to correspond, by and large, to an imperfective participle, roughly conveying a ‘gnomic’ imperfective value. The progressive meaning is conveyed by a number of affixes, some of which are said to be rarely used (such as *-meke-*), while the actual interpretation of *-(kü)le-* is far from clear, also judging from the diverse proposals put forth by various scholars, as shown by the synoptic table in Zúñiga (2001). The latter author considers *-(kü)le-* a progressive/resultative marker, namely a marker that replicates the situation described above for Baure’s so-called ‘copula’ affix, involving progressivity with atelic verbs and a perfect-like meaning with telic (especially achievement) verbs. The ‘non realized’ affix *-a-* (Smeets 2008: 173; 235f) is in practice an irrealis marker which can, in the appropriate context, suggest prospectivity, i.e. non-deictic futurity. This might look like a fairly common situation, except that this affix can cooccur with other modal markers, so that one can hardly regard it as a mood in the proper sense (as, e.g., the irrealis in the Zamucoan languages, cf. §2). However, this might be one of the properties of polysynthetic languages, where the notion of mood itself should be conveniently reinterpreted. Rather than being in mutual opposition, the various ‘moods’ might give rise to a gradient structure, with intermediate situations defined by the co-occurrence possibilities:

(15) Mapudungun (Araucanian) (Smeets 2008: 254, ex. 2)

fanten antü aku-wye-a-y-m-i
 this_much day arrive-PLPF-NRLD-IND-2-S
 ‘That day you will have arrived.’

Some of the verb affixes that create nominal forms can express aspectual values with temporal implications: see, e.g., the ‘completive subjective verbal noun’ affix (p. 224), which conveys the notion of completion, or the ‘feature’ affix *-ke-* (p. 225), which gives rise to a sort of imperfective participle. Indeed, Zúñiga [2001: 86] regards it as a general imperfective marker. Smeets even quotes two ‘pluperfects’: one for non-finite forms (p. 229f) and one for finite forms (p. 254), both indicating anteriority to a past reference time. Finally, the particle *nga* (which might be called the ‘past counterfactual’ particle) introduces nuances of regret in past-referring sentences (p. 331):

(16) Mapudungun (Araucanian) (Smeets 2008: 331, ex. 20)

chümü! nge-me-n nga
 once be-thither-IND.1S NGA
 ‘I have been there once [unfortunately].’

In sum, considering the existence of various affixes and particles with transparent aspectual and (in some cases) even directly temporal meaning, one has to agree with Mueller’s treatment of Mapudungun as a borderline case, where temporality, although not at all prominent nor always present, is nevertheless easily detectable.

3.3. Tsafiki

The last case to consider, Tsafiki, stands out for its structural diversity, although it also exhibits features typical of polysynthetic languages. As Dickinson (2002: 1) writes:

The majority of predicates in Tsafiki are complex, consisting of an inflecting element (generic verb) from a small closed class (33 members) and a non-inflecting lexeme (coverb) from a large open class of neutral elements. The generic verbs can also occur as the sole predicating element in the clause (simple verb). The coverbs can take nominalizing morphemes to function as nominals, or can co-occur with the generic verb to form a finite complex predicate. [...] All predicates in Tsafiki can be classified according to one of five verb class markers they take in certain morphosyntactic environments. These verb class markers also occur with simple verbs.

As Dickinson puts it, this bears striking resemblance to the situation in some Australian languages, as described for instance by Schultze-Berndt (2000), with their closed class of generic predicates that need to collocate with the appropriate coverbs in order to convey specific lexical meanings. As for the topic at stake, Dickinson states (p. 80):

Tsafiki has no morphemes dedicated to tense_[A] distinctions. [...] The perfective and imperfective/habitual aspects are formed with participle forms and an auxiliary. The only aspectual marker found on the verb is the progressive suffix *-na*, which can also occur on subordinate clauses.

Dickinson also notes (p. 84) that when the progressive marker attaches to a stative verb, it yields the same nuance of temporary validity that characterizes analogous cases in languages that share this behavior (cf. Eng. *John is being silly*). This proves its high degree of grammaticalization. As for temporal reference, one has to observe the organic cooperation of the various modal/evidential morphemes. On the one hand, the four irrealis constructions convey future reference out of context (p. 114f). On the other, the ‘situational’ suffix *-man* (p. 106-7) – which seems to indicate that the situation is as expected (not to be confused with the homophonous morpheme meaning ‘again’) – designates in most cases past reference, and in conjunction with progressive *-na* yields past progressive meaning:

(17) Tsafiki (Barbacoan) (Dickinson 2002: 106, ex. 136)

Aeson man=ja-man-e.
 Aeson again=come-SIT-DEC
 ‘Aeson came back [as expected].’

(18) Tsafiki (Barbacoan) (Dickinson 2002: 108, ex. 139)

Jun ayanni ano kabi ji-na-man-yo-ti-e-ti-’
 3.DISTAL.1 mother food get.LOC go-PRG-SIT-CNJ-REP-DEC-REP-DEC
 ‘They say the mother said she was going to get food.’

Furthermore, one of the irrealis markers, the so-called ‘ingressive’ *-chi*, indicates near future (proximativity) in conjunction with the progressive *-na* (p. 107-8). This corroborates the conclusion that Tsafiki might be another borderline case.

4. CONCLUDING REMARKS

In the present author’s mind, the data presented in §2 prove that Ayoreo is a radical tenseless language according to the definition in §1. Similar observations can be made for the Ebitoso dialect of Chamacoco (Ciucci 2013). In both languages, the only overt TAM component is mood/evidentiality, suggesting that they are mood-prominent languages in the sense of Bhat (1999), although in comparison with most of the languages discussed in §3 the array of mood/evidentiality markers is less comprehensive.

Section 3 has shown that the nine languages singled out in Mueller’s (2013) detailed survey exhibit varying degrees of tenselessness_A. Thus, although Ayoreo is not the only tenseless language in South America, it is certainly much closer to the ideal of radical tenselessness (i.e., tenselessness_B) than any other candidate. The present analysis has for the most part confirmed the conclusions drawn by Mueller, except for the possible downgrading of Nasa Yuwe and Tsafiki to borderline cases. As for the comparison with the Zamucoan languages, it is worth noting that practically all languages discussed in §3 exhibit morpheme combinations (of the type illustrated in example (18) above) which, although not to be interpreted as actual tenses_B, are nevertheless based on a clear compositional logic that brings about semantically transparent morphemic entities. This feature was pointed out above in example (2) with respect to Moore – an aspect-prominent, tenses_B language – but is definitely absent in all Zamucoan languages.

The overall picture is neat enough to invite diachronic speculation, namely the hypothesis that, at an early stage, South American indigenous languages must have had no exponent for aspect and temporality. Whether this was also true for mood/evidentiality is difficult to assess. Considering the pervasive and well-rooted presence of these markers, this component must have developed before the others, assigning the South American indigenous languages their characteristically mood-prominent profile.²⁰ As for aspect and temporality, the former must have developed earlier than the latter, as proven by the endemic presence of aspectual markers. Moreover, these markers can even belong to ostensibly successive layers, as shown by the coexistence of both affixes and independent particles in Mapudungun and Baure. Baure and Nasa Yuwe even suggest the possibility of successive cycles of affix creation, judging from their internal vs. peripheral position within the word. By contrast, temporality was ostensibly the last category to develop, considering the substantial number of languages exhibiting (varying degrees of) tenselessness_A.

One might object that drawing such a general inference from a small set of languages is unwarranted. Indeed, the scenario whereby TAM markers were gradually added is just one among other conceivable possibilities. The reverse scenario – namely, gradual loss of TAM markers – is equally plausible, at least in abstract terms. In practice, however, we know from creole languages that the opposite trend, consisting of gradually grammaticalizing TAM markers, appears to be the default case. Needless to say, individual languages might have deviated from this general trend. But as for the Zamucoan languages, one could hardly deny that they played the role of the “slow-poke” in this general drift towards acquiring temporal morphemes. Even accepting Carro Noya’s claim concerning the incipient grammaticalization of TAM markers in Tomaraho, the paucity of TAM features in these languages is so striking as to justify the treatment of at least Ayoreo and Ebitoso as radical tenseless languages. Possibly, the Zamucoan languages are not the only such case in South America, considering that Mueller’s survey was carried out on a large, but by no means exhaustive sample of languages. Future research will clarify the existence of further examples. At any rate, although radical tenselessness is a rare typological feature, the Zamucoan languages are not unique: the languages spoken in the so-called Bird’s Head of New Guinea, like May Brat, have been cited as such an example (Dahl 2001). Actually, according to Dol’s (1999) report, May Brat is an even more extreme case, for it seems to lack any sort of TAM markers, whereas the two Zamucoan languages present an overt mood contrast.²¹

²⁰ Dietrich (2010) points out the prominence of evidentiality in the Guaraní languages, until recently not considered to be typical examples in this respect among the South American languages.

²¹ On the other hand, not all languages claimed to be tenseless_A should be so considered. Tonhauser’s (2011) attempt to demonstrate that Paraguayan Guaraní is tenseless_A neglects the obvious fact that this language has a future tense, just like its Bolivian cognate (see Bertinetto 2006). Tonhauser reinterprets such tense as belonging to the modal domain, but this could extend to virtually all future tenses of the world’s languages. To the extent that, as Tonhauser herself admits, the Guaraní future is incompatible with present- and past-referring contexts, it ought to be regarded as expressing a non-ambiguous temporal value. The correct approach consists in assigning each tense the whole range of TAM values that it can express.

Finally, it is worth noting that no mention was made in this paper (except for Trumai) of the “nominal tense_A” issue, which, as is well-known, is a widespread feature in South American languages. In principle, it might be the case that a language presenting no TAM exponents in the VP sector nevertheless presents nominal tense. To the best of the present author’s knowledge, this situation has not been described. It is to be noted, however, that Ayoreo presents a “nominal aspect” suffix with habitual meaning: e.g., *oide* ‘what is carried or used’, *oide-be* ‘what is customarily carried or used’. Interestingly, this contradicts Nordlinger & Sadler’s (2004) generalization concerning the universal absence of aspect-oriented nominal markers, thus setting Ayoreo apart as a possibly unique case. This invites the speculation that the widespread presence of nominal tense_A markers in South American languages, combined with the equally widespread tendency towards tenselessness_A, might suggest a sort of complementary division of labor between the nominal vs. verbal system. It is conceivable that the ancestor languages developed nominal tense_A as a compensation for the lack of tense_A features in the verbal component.

Before concluding, it is worth asking what it means for a language to be tenseless (in all senses of the word). It clearly cannot mean that the speakers have no cognitive understanding of the temporality domain (or of the TAM domains at large), for this would make any social life impossible, not to mention the psychological troubles that this might cause. A quick reflection suggests the obvious answer: this has no consequence at all, it is simply one of the many ways in which languages have shaped themselves as the result of their diverse historical evolution. Just as the speakers of languages without article have no problem in understanding the notion of specificity-determination (easily supported, when needed, by the use of demonstratives), the speakers of tenseless_A languages have no difficulty in locating the events in time, making use of the alternative machinery offered by grammar and lexicon. These speakers simply have at their disposal a reduced set of tools, but this does not in any way imply that they lack the basic cognitive abilities underlying the TAM components. They rather put a heavier burden on the cooperative attitude of the addressee in extracting the appropriate information out of the communicative context. It is a trade-off: a weak morphosyntactic coding increases the need to extract information from the context by way of pragmatic inference, whereas a rich morphosyntax engages the listener in processing a highly coded linguistic string. Ultimately, the amount of cognitive work involved in understanding a linguistic act of communication might not significantly differ in the two cases. Linguistic complexity should not be computed in terms of the mere count of morphemes: presumably, the difference in actual cognitive expenditure, between these two extremes, is a zero-sum equation.

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