Research Report

LANGUAGE REVITALIZATION AS L2 SHADOW BOXING
THE CASE OF PALENQUERO PLURAL-MARKING

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Abstract

In the Afro-Colombian community of San Basilio de Palenque, there are school-based efforts to revitalize the once-endangered creole language Palenquero. At present, most Palenquero language classes do not include grammatical instruction, active student production, or corrective feedback, and there is little or no communication in Palenquero between L2 learners and fluent adult speakers. One result is that L2 Palenquero speakers are overgeneralizing the Palenquero prenominal plural marker to singular contexts, in a fashion that partly suggests a Spanish-influenced misinterpretation as a definite article. The present study summarizes oral and written production, and then analyzes processing data from an eye-tracking experiment confirming L2 learners' emergent restructuring of the Palenquero plural marker. L2 learners have regularized perceived variation similar to learners of artificial languages, and the morphological marking of plurality is seemingly being lost, possibly morphing into an emergent but still unstable definiteness marker effectively delinked from number.

Palenquero, creole language, Spanish, revitalization, pluralization

INTRODUCTION

Around the world, there are efforts to recover and revitalize endangered minority and ancestral languages, inevitably based on the teaching of the language to younger learners, and frequently involving traditional speakers as language resources and/or teachers. To

achieve a modicum of success in retaining or restoring an endangered language, effective communication between fluent speakers and L2 learners is essential, as are mechanisms that steer the acquisition process ever closer to nativelike proficiency. Among the key components crucial to the effort are the existence of a sufficient number of fluent native or near-native speakers to saturate the learning environment, a cohort of motivated L2 learners, constant communication with and encouragement by the native speakers, and at least some explicit instruction, including corrective feedback in the early stages of formal instruction and periodically thereafter. When one or more of these components are missing, full L2 acquisition may not take place, and the resulting grammars are not necessarily limited to partial subsets of the target language, but may exhibit emergent traits of their own. The present study draws on a unique language revitalization environment, characterized by a critical mass of native speakers, a high level of enthusiasm on the part of potential L2 learners, and at least some formal teaching, but in which explicit grammatical instruction, systematic corrective classroom feedback, and viable intercommunication with native speakers in the target language are largely absent. The setting is the Afro-Colombian village of San Basilio de Palenque, where the traditional creole language known to linguists as Palenquero and to its speakers as *Lengua (ri Palenge)* "[the] language (of Palenque)" is the subject of a community-wide revitalization effort (Lipski, 2014; Moñino, 2012; Schwegler, 2011). Given the highly cognate nature of Spanish and Palenquero (sharing the majority of lexical items but differing in morphosyntax), without communicative opportunities and error-correction strategies, a fundamental component of Palenquero—nominal pluralization—is apparently morphing into a hybrid definiteness marker devoid of number reference.

After summarizing data on production of the Palenquero plural marker by L2 learners, the analysis of data from an eye-tracking processing study demonstrates that the Palenquero plural marker—the prenominal particle *ma*—primes fluent speakers to anticipate a following plural noun phrase, while L2 learners as a group exhibit no such advantage. L2 learners have not fully grasped the nature of the Palenquero plural marker, and may be inadvertently mapping this element onto a more familiar Spanish configuration: the definite article.

THE PALENQUERO LANGUAGE: REVITALIZATION, TEACHING, AND LEARNING PALENQUERO AS L2

Palenquero is an Afro-Iberian creole language spoken in San Basilio de Palenque, a village of around 4,000 residents in northern Colombia. There are also older speakers among the Palenquero diaspora in Cartagena and Barranquilla. The community was formed toward the middle of the seventeenth century (Navarrete, 2008) by maroons (enslaved Africans who escaped bondage) from the Spanish port of Cartagena de Indias, being the sole survivor of what was once a large number of *palenques* "fortified communities" in Colombia. The Palenquero language apparently emerged around the turn of the eighteenth century, and well into the twentieth century all members of the community spoke *Lengua* natively (whether or not together with L1 Spanish is difficult to ascertain). Most of the Palenquero lexicon is closely cognate with or identical to local vernacular Spanish (Cásseres Estrada, 2005), but Spanish and Palenquero are not mutually intelligible, although a few short phrases might be understood by Spanish speakers.

Palenquero shares with Spanish basic head-initial phrase-structure patterns, including predominantly SVO word order, prepositions, and postnominal adjective placement (Moñino, 2002, 2014; Schwegler, 2013a, 2013b; Schwegler & Green, 2007 and the references therein). Like other creole languages, Palenquero has no grammatical gender (modifiers are derived from the Spanish masculine form), and verbs do not inflect for person and number but rather combine with preverbal tense/mood/aspect particles. Specific to Palenquero, negation is typically clause-final rather than preverbal, there are no preverbal object clitics as in Spanish, a single set of pronouns is used for all argument positions, and possession is expressed by postposing the possessor. Another striking departure from Spanish, and the focus of the present study, is the use of the prenominal pluralizing particle *ma.*

Beginning around the middle of the twentieth century, Palenqueros began to work outside of the community, and were mocked for their language. As a consequence, Palenquero families increasingly avoided using the language with their children, and warned them not to use *Lengua* outside of the community (Arrázola, 1970; Hernández Cassiani et al., 2008). By the time that intense research began in the early 1980s, Palenquero had the characteristics of an endangered language and several scholars predicted its demise within a couple of generations (e.g., Moñino, 2003; Morton, 2005; Pfleiderer, 1998). Matters began to change with increasing visits by scholars and journalists, the UNESCO recognition of Palenque in 2005 as a part of the Intangible Cultural Heritage of Humanity, and the creation of an ethno-education program designed to teach the Palenquero language in the community's schools.

The sociolinguistic dynamic is quite complex in a village that can be traversed in less than 15 minutes, and spoken Palenquero is not heard as commonly as in previous generations, but ethnic pride and the interest shown by tourists and scholars has contributed to the increased use of the language by many middle-aged and elderly residents who may once have been reluctant to use Palenquero. However, only a few adolescent or younger residents live in households where the Palenquero language is actively used, and even fewer are routinely addressed in the language. Most young people know at least a handful of the most common lexical items, many of which make their way into the local Spanish vernacular (e.g., *moná* "child" with Spanish-like gender-inflected diminutives *monasito* "boy" and *monasita* "girl," *oriki* "dance", and *kombilesa* "friend"). The popular hip-hop group Kombilesa Mi ("my friend" in Palenquero) performs rap music in Palenquero, and a few of their lyrics have spread among the younger generation. However, except for the small number of young heritage speakers (typically living in households with a Palenquero-speaking grandmother or great-grandmother), the Palenquero input that young people receive comes almost exclusively from school classes.

There are no externally validated proficiency measures for Palenquero, but studies of individual phenomena reveal considerable consistency of traits that set L2 Palenquero speakers apart from fluent native speakers. This includes use of preverbal particles (Lipski, 2020b), Spanish-like feminine gender agreement (Lipski, 2015, 2018b), placement and processing of negative elements (Lipski, 2010, 2017, 2018a), use of the pluralizer *ma* (Lipski, 2012a, 2014), and overall performance with interviews and translation tasks (Lipski, 2020a, 2020b). These observations have proven to be more reliable than self-rating or teacher judgments, which nonetheless cannot be completely dismissed. All these data informed the selection of participants in the present study.

Despite considerable enthusiasm, at present (early 2020), Palenquero language instruction—beginning in preschool and continuing through secondary school—occurs only once or twice a week for no more than an hour or two, and is mostly limited to teaching individual words and emblematic phrases. Only beginning in the eleventh grade does the teacher at times speak to students in Palenquero, but there are no grammatical explanations, contrasts with Spanish, or student production of *Lengua.* The current twelfth-grade teacher (who has only recently returned to teaching Palenquero) does engage the students in interactive exercises and offers some feedback on student performance, although still without any explanation of structures or contrasts with Spanish (Gómez Rodríguez, 2017; also Herrera Llorente & Álvarez Romero, 2013). Although adult residents of Palenque generally support the language-revitalization efforts, fluent adult speakers almost never use the Palenquero language with young learners, and it is not uncommon to hear discouraging and even disparaging comments on young learners' purported lack of competence in the creole. This stands in contrast to the enthusiasm with which many residents teach fragments of the language to visitors. Other adults, when queried about the prospects for survival of the Palenquero language, have expressed optimism because young people "have it in their blood" due to their Palenquero heritage. This viewpoint—perhaps even implicitly held by some teachers—embodies the mistaken assumption that the language can be acquired effortlessly just by living in Palenque (the "genetic fallacy" as described by Dauenhauer & Dauenhauer, 1998, p. 84), although most young people have few opportunities to effectively process or produce the language. Few Palenquero language students take the initiative to practice their language skills with fluent speakers, even at moments when the latter are speaking Palenquero, due to some combination of inhibition, timidity, indifference, or simply unwillingness to leave their own linguistic comfort zone. The result is the seemingly paradoxical existence of two hived-off versions of the Palenquero language within the same community, with only the Palenquero language teachers in a sociolinguistic position to use the language with both groups (but not serving as a linguistic conduit between them). The combination of no explicit grammar instruction, corrective feedback during instruction, or when attempting to use the language with fluent speakers, or meaningful two-way communication with fluent Palenquero speakers creates a "perfect storm" for unchecked miscues and unanticipated divergences from the target language. One such divergence is found in the use of the Palenquero plural marker.

PLURAL MARKING IN PALENQUERO: L1 AND L2 USAGE

Nominal plural marking in Palenquero is normally effected with the prenominal particle *ma* (possibly of Bantu origin: Moñino, 2007, 2013; Schwegler, 2007a, 2007b, 2012), and only when plurality is distinctive. Although Spanish affixes the nominal plural suffix /-s/ to all elements of a plural noun phrase, including determiners, adjectives, and quantifiers, in Palenquero only a single instance of *ma* marks nominal plural, as in (1), produced by fluent adult speakers.

(1)

ma	tatá	suto	asé	nda	suto	guto
PL	parent	1.PL	HAB	give	1.PL	pleasure

"Our parents give us pleasure"

ma	muhé	akí	Palenge	ase-ba	komblá	yuka	San Kaetano
PL	woman	here	Palenque	HAB-IMP	buy		cassava	San Cayetano

"The women here in Palenque used to buy cassava in San Cayetano"

Although there is some variation in the use of *ma* with plural items, particularly when generic reference is intended, fluent Palenquero speakers never use *ma* unambiguously with singular noun phrases (cf. Cassiani Obeso, 2019a, 2019b). Young L2 Palenquero speakers, however, routinely use *ma* with unmistakably singular referents, as well as (usually) with plural referents, which makes it impossible to determine from production data alone whether they recognize a pluralizing function for *ma*. The hyper-extension of Palenquero *ma* by L2 speakers has been verified in several production tasks, including picture naming (Lipski, 2015; also encountered by Deibel, 2020; Dussias et al., 2016), written assignments (Lipski 2014, 2020a, 2020b; Pérez Miranda, 2011; cf. Schwegler, 2011), rapid-translation Spanish >> Palenquero (Lipski, 2020a, 2020b), and sociolinguistic interviews (Lipski, 2014, 2020a, 2020b), exemplified in (2)–(5), where nonplural *ma* is glossed simply as "ma." Apparent underprocessing of *ma* emerges in Palenquero >> Spanish translation tasks, as in (6).

(2)   WITH SINGULAR IMAGE

ese	é	*ma*	posá
DEM	COP	*ma*	house

"that is [a] house"

(3)   FROM A WRITTEN ASSIGNMENT

andi	*ma*	loyo	a	abeba	un	mojan
LOC	*ma*	creek	PERF	have-IMP	one	troll

"En la cienega había un mojan" {students' own translation of the Palenquero phrase}
"In the creek there was a troll"

(4)   FROM SOCIOLINGUISTIC INTERVIEW

ma	Toño	ta	andi	loyo
ma	Tony	COP	LOC	creek

"Tony is down by the creek"

(5)   FROM SPANISH (SINGULAR) >> PALENQUERO TRANSLATION[1]

(a)

el	arroz	de	coco	es	una	comida	sabrosa …
the	rice	of	coconut	COP	a	food	tasty

"Rice with coconut is a tasty dish" {13 translated *el arroz* "the rice" with *ma*; 10 translated with no determiner}

(b)

la	leche	materna	es	mejor	que	la	leche	de	vaca
the	milk	maternal	COP	better	COMP	the	milk	of	cow

"Mothers' milk is better than cows' milk" {21 translated the first *la leche* "the milk" with *ma*, 10 translated without determiner}

(6)   FROM PALENQUERO (PLURAL) >> SPANISH TRANSLATION

(a)

aola	polé	semblá	kaña	andi	*ma*	losa	nu
now	able	plant	sugarcane	LOC	PL	plot	NEG

"Now [we] can't plant sugarcane in our garden plots" {24 translated as singular, 3 as plural}

(b)

primé	kasa	ri	materiá	loke	asé	akí	hwe	kasa	*ma*	tatá	*mi*
first	house	of	cement	COMP	make	here	COP	house	PL	father	1.S

"The first cement-block house built here was my parents' house" {37 translated as singular, 5 translated as plural}

(c)

ma	chikito	tan	pelé	lengua	pero	suto	*ma*	bieho	*nu*
PL	child	FUT	lose	language	but	we	PL	old	NEG

"The children will lose the (Palenquero) language, but not us old folks" {29 translated both plural noun phrases as plural, 3 translated the first noun phrase as singular}

(d)

Kuando	ané	asé	miní	akí	*ma*	afrikano
when	3.PL	HAB	come	here	PL	African
suto	asé	kaminá	ku	ané		
1.PL	HAB	walk	with	3.PL		

"When Africans come here, we walk with them" {47 translated as plural, no translations as singular}

The oral and written production data show that L2 Palenquero speakers are aware of the existence of *ma*, but given the numerous instances in production of *ma* with unquestionably singular reference, such corpus data are not sufficient to determine the extent to which L2 speakers recognize *ma* as a plural marker, with overgeneralization to other contexts. At the same time, the disparities in Palenquero-to-Spanish translations exemplified in (6) suggest that when processing Palenquero, L2 speakers may rely heavily on contexts likely to involve plural referents, with *ma* having comparatively low cue strength. In (6a) for example, a single farm could plausibly be the referent. In (6b), because Palenquero, like Spanish, pluralizes the word for "father" to mean "parents," a failure to process *ma* as plural would result in the plausible reading "my father's house." In (6c), however, a singular reading for the first noun phrases ("a child" instead of "children") is pragmatically unlikely in the context of discussing community-wide language loss, while the presence of *suto* "we" before the second plural noun phrase renders the plural *ma* redundant, as does the presence of *ané* "they" in (6d). Such contextual cues may also aid fluent Palenquero speakers in processing, but only as a redundant backup, given that they do not produce examples of *ma* with unmistakably singular referents. If Palenquero *ma* is in fact an exclusively plural marker, then encountering *ma* during processing should prompt anticipation of a following plural noun phrase, even in the absence of facilitating contextual clues. This provides a criterion for empirically examining the online processing of *ma* by both L1 and L2 Palenquero speakers.

EXAMINING ONLINE PROCESSING: AN EYE-TRACKING EXPERIMENT

In this study, online processing of Palenquero *ma* was examined utilizing eye-tracking methodology, a technique that is eminently suitable for the Palenque field environment, and that offers the advantage of excellent temporal resolution combined with a high signal-to-noise ratio (i.e., usable with a single presentation of stimulus items, unlike, e.g., electrophysiological techniques such as EEG/ERP). Moreover, eye-tracking can be carried out with highly portable equipment suitable for even the most challenging field

settings, and can be employed with naïve and nonliterate participants as well as with languages that have no established written tradition. These features are crucial in working with the participants in the present study

The eye-tracking experiment that targeted processing of *ma* utilized the visual world paradigm (Huettig et al., 2011; Tanenhaus & Trueswell, 2006), in which participants' gazes are drawn to specific on-screen images in response to auditorily presented stimuli. For each trial, participants saw two images on the screen while listening to a Palenquero sentence "Find {*ma*} […]" with the target word inserted. The Palenquero plural marker *ma* was present in all trials in which at least one of the images would evoke a plural response. The fundamental goal was to determine whether hearing the plural marker *ma* would prompt participants to shift their gaze to a plural image even before hearing the target word. This approach is similar to that used to test the effects of gender marking on determiners (Dussias et al., 2013; Lew-Williams & Fernald, 2007, 2010; Morales et al., 2016), in which gender-marked articles triggered participants' gaze to the appropriately gendered image. The hypothesis was that when given a choice between a singular distractor image and a plural target image, adult speakers' gaze would begin to shift toward the plural target upon hearing the plural marker *ma*, that is even before the name of the object. In addition, if presented with a plural target image together with a singular image of an item beginning in *ma-* (e.g., *machete* "machete," *marímbula* "thumb piano") or the opposite configuration (singular target in *ma-* with plural distractor image), adult speakers would experience momentary indecision, with slower gaze fixation to the target than in nonambiguous plural target versus singular distractor cases. However, the time course of gazes to the target image in combinations of singular target + singular distractor, plural target + plural distractor, and singular target + plural distractor should be similar. If younger L2 Palenquero speakers do not acknowledge *ma* as a plural marker, then the presence of *ma* should not prompt anticipatory gazes toward a plural target image in the plural target versus singular distractor condition, and singular nouns in *ma-*, whether as target or distractor, should behave no differently than other items.

PARTICIPANTS

As with all previous research reported in the preceding text, the experiment was carried out in the village of San Basilio de Palenque. A total of 70 Palenquero-Spanish bilinguals participated, of which 36 were self-classified younger L2 Palenquero speakers (ages 18–24) whose primary exposure to the language was in school settings. The remaining 34 participants were adults (ages 31–64) who had learned Palenquero as a family language. None had known auditory or visual impediments. All participants were recruited by a respected community leader and Palenquero language teacher, who also corroborated participants' relative proficiency levels in Palenquero. All participants gave informed consent and received compensation for their time.

MATERIALS

The stimulus set consisted of 60 pairs of images, placed in the upper corners of the computer screen. The images were large enough ($6.5\,\text{cm}^2$) to obviate any possible degradation of accuracy at the corners of the screen. All the images were color

photographs taken in Palenque and representing easily recognizable local items, for example rustic implements, homemade candy, farm animals, typical dwellings, and musical instruments. A Palenquero language teacher who has collaborated extensively with previous research verified the pictures and accompanying lexical items (in posttest debriefing all participants confirmed that they knew all the words used in the stimuli). Twenty of the pairs contained one singular and one plural image, 20 contained two singular images, and 20 contained two plural images. A female Palenquero speaker recorded the names of each of the items. She also recorded the carrier words *enkontrá* "find" and *enkontrá ma* "find (pl.)." The carrier words were combined with the stimulus items in PRAAT (Boersma & Weenink, 1999–2005), and the resulting sound files normalized for intensity. For singular targets, the offset of the carrier word *enkontrá* occurred at 1,090 ms, and the offset of the plural carrier phrase *enkontrá ma* occurred at 1,650 ms. Using a video editor, the visual images and sound files were incorporated into video clips and loaded into the Tobii Pro Lab eye-tracking software package. Between each stimulus image a centered fixation cross appeared.

PROCEDURE

Before the beginning of the experiment, the participants saw the images to be used one at a time, accompanied by the corresponding Palenquero word, to ensure familiarity with the test items. Participants were seated in front of a laptop computer and listened to the stimuli through over-the-ear headphones. They were instructed to move the mouse cursor to the appropriate image as soon as possible after hearing the stimulus word. Eye movements were recorded with a Tobii X3-120 portable eye-tracking camera affixed to the bottom of the screen (sampling rate 120 Hz), and analyzed with the Tobii Pro Lab software package. The Pro Lab calibration was included at the beginning of each experiment, and although the Tobii X3-120 is designed to compensate for considerable head movement, participants were instructed to keep their head as motionless as possible during the relatively short (~15 minutes) task. The author administered the experiment for all participants, and verified compliance with this request. After visually inspecting the playback videos of eye movements, all correct responses in the output data from the eye-tracking system were analyzed in R, and the point at which the proportion of gazes to the target image as opposed to the nontarget reached statistical significance ($p < .05$) was determined with the eyetrackingR package (Dink & Ferguson, 2015), ultimately using the bootstrapping option with 1,000 resamples. The other options provided by the eyetrackingR package, basic t-test, t-test with Bonfaronni correction, and Holm's test were also calculated, and in most cases were very close to the bootstrapped values, and overall statistical comparisons utilizing bootstrapping did not differ significantly from calculations based on the corrected t-test or Holm's test. The bootstrapped values were chosen for reporting because they were taken as a measure of the robustness of the data, given the convergence across multiple resamplings. From the point at which gaze proportion to the target reached significance, a conservative value of 200 ms was subtracted to account for the minimal time normally required to initiate a language-triggered saccade (Altmann, 2011; Fischer, 1992; Matin et al., 1993; Saslow, 1967).

RESULTS AND DISCUSSION

As a group, the younger L2 Palenquero speakers' gaze patterns were more erratic than those produced by fluent Palenquero speakers. Although this observation cannot be quantified, the composite trial-by-trial gaze plots and the gaze-tracking videos produced by Tobii Pro Lab revealed more prestimulus eye movement away from the center of the screen and "exploring" of the images prior to hearing the stimulus items. Whether this is reflective of younger participants' level of confidence in dealing with Palenquero or simply another manifestation of the youthful fidgeting observed during other tasks cannot be determined from the data. The rate of correct responses (i.e., the gaze ultimately settling on the appropriate image) was slightly lower (92.9%) for younger L2 Palenquero speakers than for fluent adult Palenquero bilinguals (99.4%), but in general participants followed the instructions and correctly identified the target images. Table 1 gives the times at which gazes to the target images became statistically significant.

The data in Table 1 show that adults' gaze toward a plural target occurred more quickly when the distractor was singular rather than plural, reflecting the advantage provided by the plural marker *ma*: *Welch-t*(71.1) = 3.27, *p* = .002. Younger L2 Palenquero speakers showed no such advantage, and in fact on average took longer with singular distractors than with plural distractors. Also evident is the significantly longer reaction time for adult participants when choosing between a plural target and a singular distractor beginning in *ma-*, which initially caused confusion with the Palenquero plural marker *ma*: *Welch-t*(37.9) = 2.845; *p* = .007. There was no such distinction for younger L2 Palenquero speakers. Figure 1 illustrates these differences, including the extended vacillation between target and distractor for adult Palenquero speakers. The left dashed line indicates the offset of the stimulus word, and the right dashed line marks the 200 ms minimal latency for significant language-triggered saccades.

For adult speakers, gazes to singular targets beginning with *ma-* combined with plural distractors also took significantly longer than gazes to other singular targets with plural distractors, indicating the momentary confusion caused by a word whose initial syllable is identical to the Palenquero plural marker: *Welch-t*(22.9) = 3.65, *p* = .001. Once more, no such difference was observed for younger L2 Palenquero speakers. Figure 2 displays the behavior of this configuration.

Both fluent adult Palenquero speakers and younger L2 participants took longer to shift their gaze to plural targets than to singular targets, presumably because although the screen contained a single image in each upper corner, there was more than one object in the plural targets.

TABLE 1.   Time past carrier phrase offset at which gaze to target image became significant (including 200 ms minimum saccade time)

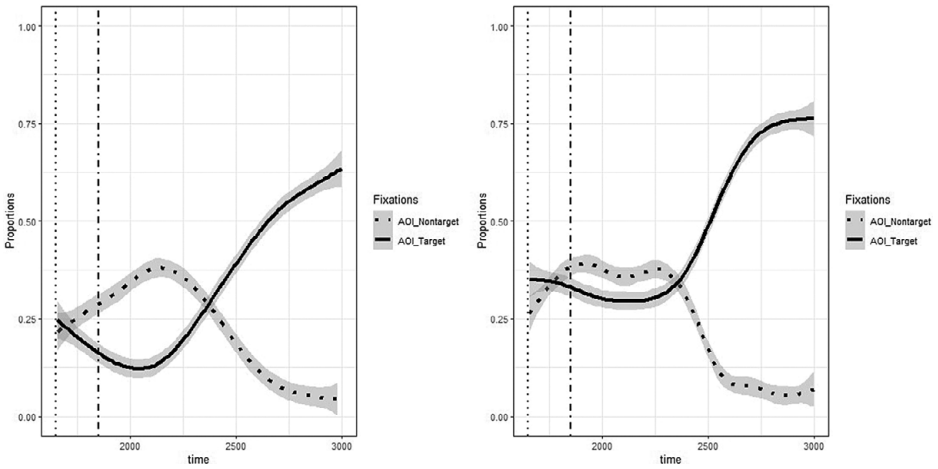| Type	Adult bilingual	Young L2 bilingual
Plural target, singular distractor	565	695
Plural target, singular *ma-* distractor	782	679
Plural target, plural distractor	675	542
Singular target, singular distractor	511	556
Singular target, plural distractor	493	455
Singular *ma-* target, plural distractor	595	532

FIGURE 1.   Adult (left) and younger L2 (right) gaze plots, plural target with singular distractor in *ma-*.
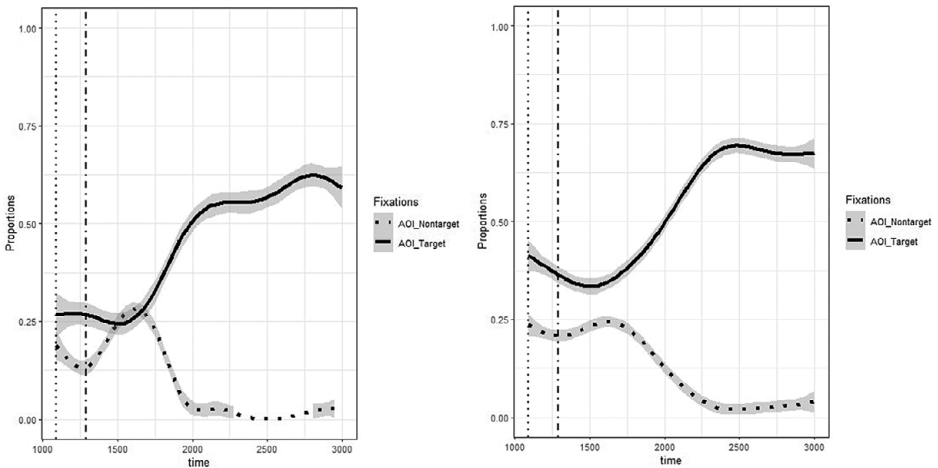

FIGURE 2.   Adult (left) and younger L2 (right) gaze plots, singular target in *ma-* with plural distractor.

GENERAL DISCUSSION

The eye-tracking data obtained from fluent Palenquero speakers and younger second-language learners indicate that many L2 speakers do not process *ma* as a plural marker, while fluent Palenquero speakers do respond to *ma* as an indication of an upcoming plural noun phrase. This is consistent with the previously cited production data, in which L2 Palenquero speakers routinely combined *ma* with indisputably singular nouns.

The distinction between singular and plural is fundamental to all languages, and at first glance, it is surprising that even in the absence of explicit instruction, L2 Palenquero speakers have not fully acquired the morphologically transparent and syntactically simple Palenquero pluralization with *ma*. A number of factors converge to render this outcome

more likely. Clearly relevant is the aforementioned lack of grammatical instruction in Palenquero languages classes, coupled with the fact that most L2 Palenquero speakers rarely use the language with fluent adult bilinguals. Naturalistic second-language acquisition does not normally involve corrective feedback, but to be effective there needs to be more robust input than what L2 Palenquero learners receive outside of the limited classroom exposure. The combination of minimal naturalistic input and neither explicit grammar instruction nor error correction in school further entrenches noncanonical use of *ma*. L2 Palenquero speakers are aware that *ma* is a uniquely Palenquero item associated with nouns, but may regard it as simply an optional element whose presence adds authenticity to attempts at producing Palenquero. As a possible analogy, adult Palenquero speakers often detach the imperfective suffix *–ba* from verbal roots and freely reattach *–ba* to a variety of other grammatical forms without changing meaning (Lipski, 2012b, 2016), even extending this usage as a verbal disguise known as *retahila* (Moñino, 2007, pp. 53–54), and L2 speakers may have mistakenly assumed that *ma* could "float" in a similar fashion.[2]

POSSIBLE GRAMMATICAL RE-/MISANALYSIS

From a grammatical perspective, the fact that *ma* appears prenominally in Palenquero is at odds with all forms of nominal and verbal inflection in Spanish, which is invariably suffix based. The linear position occupied by Palenquero *ma* does correspond to Spanish determiners and, in particular, definite articles. Unlike Spanish, Palenquero has no definite articles (only the invariant indefinite determiner *un*, which like its Spanish counterpart also means "one"). It is generally agreed that the only means of signaling definiteness in the singular is with bare nouns, although the latter do not always represent singular or definite (Schwegler, 2007a). *Ma*, however, while always marking plurality, occurs in both definite and generic contexts (Friedemann & Patiño Rosselli, 1983, pp. 141–142; Moñino, 2013, p. 46, 2014, pp. 34–35). Based on the distribution of *ma* in production data, many L2 speakers may be using *ma* as a surrogate for "missing" definite articles.[3] Although the homology is not exact, the distribution of Palenquero *ma* is very similar to that of the Spanish definite articles (*el*, *la*, *los*, *las*), both in terms of its syntactic environment (immediately before the head noun) and in terms of the frequent indication of definiteness. To the extent that L2 Palenquero speakers are mapping *ma* onto the phrase structure of Spanish determiner phrases, for these learners *ma* is the "wrong" element in the "right" place.[4]

L1 VARIATION AS L2 MISINTERPRETATION

In many ways, L2 Palenquero speakers' overextension of *ma* is similar to the trajectories followed by children who acquire variable phenomena in their native languages, as well as to the learning of artificial languages (Hendricks et al., 2018; Hudson Kam & Newport, 2005, 2009; Samara et al., 2017; Wonnacott et al., 2017).[5] When faced with variable structures in a naturalistic setting, learners frequently attempt to regularize the data, en route to acquiring nativelike probabilistic distributions. This is particularly true when the variability is not constrained by overt sociolinguistic factors such as speaker gender, class, age, and so forth, and may entail overextension of one of the variants. Children more frequently gravitate toward regularization than adult L2 learners (Hudson Kam &

Newport, 2005), although with higher levels of dispersion, adults may also regularize the variable input (Hudson Kam & Newport, 2009). In Palenque, L2 learners of Palenquero straddle the child-adult categories because some exposure to the language occurs during childhood (e.g., in the largely symbolic preschool and primary school "instruction"), with more intense reinforcement during later adolescence.

Strictly speaking, adult usage of Palenquero *ma* does not exhibit the type of probabilistic variability that typically results in regularization by L2 learners because *ma* is used unambiguously by fluent speakers only to express plural, and from the speakers' standpoint is never truly optional or redundant. However, the fact that *ma* is not usually present when numbers or other quantifiers signal plurality, nor is it frequent in generic usage (which in Spanish typically involves a plural noun phrase), especially in nonsubject positions, may create the impression of true probabilistic variation. This semantically grounded variation has not been incorporated into L2 Palenquero learners' use of *ma.* A similar regularization can be observed in L2 Palenquero speakers' use of preverbal tense/ mood/aspect particles (Lipski, 2020b), which are used consistently and with clearly differentiated meaning by fluent adult speakers, but whose semantic nuances have not been fully acquired by L2 learners, who have overgeneralized configurations not found in fluently spoken Palenquero. In both cases, the lack of corrective feedback during explicit instruction, or frequent communication in Palenquero with fluent adult speakers has resulted in a microlinguistic "bubble" in which these originally inaccurate regularizations can prosper.

Research conducted with artificial languages has produced results similar to those found in child language acquisition, demonstrating that distributional patterns alone can lead to the acquisition of differing grammatical categories (Reeder et al., 2013, 2017). Younger L2 Palenquero speakers, exposed to Palenquero but not receiving any metalinguistic information in language classes nor sufficiently robust input outside of school settings behave in many ways like learners of an artificial language, and may have mapped the Palenquero plural marker *ma* onto the structural scaffolding of Spanish definite articles, as a more inductive choice than acknowledging a familiar concept (plural morpheme) in an unexpected position (prenominal).

Not all examples of *ma* produced by L2 Palenquero speakers fit the structural distribution of Spanish definite articles, whether or not *ma* is used with plural nouns. In examples such as (7), all produced spontaneously by L2 Palenquero speakers, no article or other determiner would be permitted in Spanish in the position occupied by *ma.*

(7)
(a)

ele	a ten	un chochá	di	*ma*	ngombe
3S	have	a bunch	of	*ma*	cow

"he has a bunch of [*ma*] cows"

(b)

e	*ma*	changaína	ta	ngolo
DEM	*ma*	girl	COP	fat

"that [*ma*] girl is fat"

(c)

un	dia	*ma*	un	ño	a	bae	po	monde

one	day	PL	one	man	PERF	go	for	woods

"One day a [*ma*] man went to the woods"

(d)

ele	kuando	taba	pekeño	*ma*	bo	a	yebá-lo
3.S	when	COP-IMP	small	*ma*	2.S	PERF	carry-3.S

"When (s)he was little, [*ma*] you carried him/her off"

While not the most common L2 Palenquero usage, the residue of utterances such as (7) is consistent with the (mis-)interpretation of *ma* as a variably occurring prenominal marker, whether or not occupying the same position as Spanish articles.

CONCLUSIONS

The community-wide second-language acquisition of a creole language (Palenquero) by monolingual speakers of the historical lexifier (Spanish) is in effect the converse of postulated decreolization trajectories (e.g., Bickerton, 1980; Rickford, 1987; Stauble, 1978; Washabaugh, 1977), and given the acknowledged links between pidginization/creolization and L2 acquisition (e.g., Mufwene, 2010; Muysken, 2001; Schumann, 1978; Siegel, 2008), potentially provides insights into the emergence of innovative structures in creoles that cannot be plausibly extrapolated from the input provided by the lexifier language. In the case of L2 usage of Palenquero *ma*, the potential consequences for the long-term survival of the Palenquero language are significant because the fundamental notion of morphologically marking plural is seemingly being lost, possibly morphing into an emergent but still unstable definiteness marker effectively delinked from number (cf. Ionin, 2006; Ionin et al., 2013; Serratrice et al., 2009 for some ideas of how this might happen). If this trend stabilizes, it does not imply that *ma* will not be used with plural nouns—clearly not the case—but rather that *ma* will no longer SIGNAL plurality. In such circumstances—as opposed to the arguably more plausible eventual disappearance of Palenquero as a viable medium of communication—it will not be the result of the normal transgenerational transmission of a language within a speech community, but rather the unexpected product of a well-intentioned language revitalization effort only partially sustained by an effective L2 perspective.

NOTES

[1]The varying numbers reflect the fact that not all participants gave complete responses in the translation task.

[2]In a pilot project conducted by Estilita Cassiani Obeso with Palenquero high school seniors in June 2019 (Cassiani Obeso, 2020), the students—all of whom had taken Palenquero language classes for several years—indicated that they were not aware that *ma* was to be used only to signal plural. This anecdote underscores the ecological reality of language revitalization in Palenque.

[3]Armin Schwegler (personal communication) has suggested that some L2 speakers may incorrectly associate Palenquero *ma* with the similar-sounding Spanish feminine definite article *la*, which also occurs prenominally. Palenquero has no grammatical gender (adjectives are derived from the corresponding Spanish masculine singular), and the materials in the author's corpus show use of singular *ma* with nouns whose Spanish cognates are both masculine (taking the definite articles *el/los*) and feminine (taking *la[s]*), so there is no one-to-one mapping between *ma* and nouns whose Spanish equivalents are feminine. Given the overwhelming preference for Spanish masculine gender as the unmarked default in contact situations (including loan-

borrowings as well as creolization), a simple equation Palenquero *ma* ≡ Spanish *la(s)* is not compelling, although it may be a contributing factor.

[4]It is probably not coincidental that among the same L2 Palenquero speakers, another quintessential Palenquero grammatical feature, unbounded clause-final negation (as opposed to Spanish immediately prever-bal negation) is also frequently overlooked by L2 speakers (Lipski, 2017, 2018a, 2020a), who evidently do not adequately process negation that occurs in an "unexpected" position. In the case of Palenquero negation, the clause-final negator *nu* is the "right" element in the "wrong" place, and with no corresponding element in Spanish phrase structure, the Palenquero negator is not effectively processed.

[5]Karen Miller suggested the similarity between L2 acquisition of Palenquero and artificial language learning.

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