Reduplication and repetition of person markers in Guaporé isolates

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Abstract The person marking system of the language isolate Kwazá, spoken in the Brazilian Amazon, has several unusual properties. Its bound inflectional person suffixes can be reduplicated in order to express temporal and aspectual notions in a rather un-iconic way. The reduplicated segments are not defined by phonotactic boundaries, such as the syllable, but they are based on morphological units, disregarding their phonotactic structure. The origin and nature of this rare type of reduplication are not very clear. Morphologically based reduplication is not attested in the neighbouring languages with which Kwazá forms a linguistic area. However, Kwazá person markers are also involved in an unusual type of recursive construction that is encountered in the neighbouring languages, too. Recursive application of person markers occurs in Kwazá to express quoted speech in a transparent manner and has also given rise to less transparent expressions such as the desiderative. Similar constructions in the Aikanã and Wari’ languages suggest that this quotative construction is an areal feature of at least the Brazilian part of the Guaporé region. The quotative construction may help to understand the poorly understood phenomenon of seemingly redundant person marking in Kanoê, another language isolate of the region. It remains a question whether it also plays a role in the origin of the unique morphologically determined reduplication constructions of Kwazá.

Keywords Person marking · Reduplication · Quotation · Amazonian languages · Areal diffusion
### Abbreviations

| Abbreviation | Meaning                  |
|--------------|--------------------------|
| AO           | Animate object           |
| ATT          | Attributive              |
| AUX          | Auxiliary                |
| CAU          | Causative                |
| CAUS         | Causational              |
| CL           | Classifier               |
| CSO          | Cosubordinative          |
| DEC          | Declarative              |
| DESI         | Desiderative             |
| DET          | Detrimental              |
| DIR          | Directional              |
| EXCL         | Exclusive                |
| EXH          | Exhortative              |
| FRUST        | Frustrative              |
| FUT          | Future                   |
| INCL         | Inclusive                |
| INT          | Interrogative            |
| INTENS       | Intensifier              |
| IS           | Indefinite subject       |
| LOC          | Locative                 |
| NEG          | Negative                 |
| NOM          | Nominaliser              |
| O            | Object                   |
| P            | Plural                   |
| PAST         | Past                     |
| POS          | Possessive               |
| PROX         | Proximate                |
| RECI         | Reciproque               |
| RED          | Reduplication            |
| REF          | Reflexive                |
| REM          | Remote past              |
| RES          | Resultative nominalisation |
| RF           | Realis future            |
| RP/P         | Realis past/present      |
| S            | Singular                 |
| SWR          | Switch reference         |
| TRA          | Transitiviser            |
| VCL          | Verbal classifier        |
| VOL          | Volitive                 |
| 1O           | 1st person object        |
| 1P           | 1st person plural        |
| 1S           | 1st person singular      |
1 Introduction

The Guaporé river forms the border between the northeastern Bolivian lowlands and the western Brazilian state of Rondônia. It flows through one of the most linguistically diverse regions of South America. About the size of Germany, this Amazonian lowland region harbours around 50 indigenous languages, that belong to eight different stocks and include ten linguistic isolates. Three of the linguistic isolates of the region, Kwazá, Aikanã and Kanoê, are close traditional neighbours. Kwazá has a number of rare properties that may have consequences for our general assumptions about what is possible in languages. Kwazá (formerly known as Koaiá) is still spoken by around 25 people. They live among 175 speakers of Aikanã, in an indigenous reserve in the south of Rondônia. Like Kwazá, Aikanã has been studied only very recently and almost nothing is published. The other language isolate is Kanoê, which, with five speakers, is almost extinct. The present article will include new insights into repetition of person markers in these languages, partially based on published sources and partially based on new data from the field. The two main issues of reduplication and repetition will be dealt with in this article in separate sections. In Sect. 2, reduplication strategies in Kwazá are introduced, focussing on reduplication of bound morphemes. This type of reduplication is found neither in other languages of the region, nor in any other language that I am aware of. In Sect. 3, repetition of person markers in Kwazá, Aikanã and Kanoê is discussed and similarities with multiple person markers in Wari’, a Chapacuran language of Rondônia, are pointed out. Finally some possible explanations will be considered.¹

2 Reduplication in Kwazá

Reduplication is widely attested in the languages of the Guaporé region and in the Amazon in general, and it occurs in many forms with a score of functions. In addition to the well-known types of reduplication encountered in Kwazá, the language also has an unusual type of reduplication. In the following sections reduplication of phonotactic units is discussed first. Thereafter, the special phenomenon of reduplication of morphological units is presented.

2.1 Reduplication of phonotactic units

Like many languages, Kwazá has phonotactically based reduplicative strategies, such as reduplication of a verbal or adverbial lexical root or of one of its syllables, to express repetition or progression of events, intensity, quantity, argument number etc. in a more or less iconic way. Productive reduplication occurs almost exclusively on verbs and adverbs, whereas nouns may contain only morphologically non-transparent reduplicative patterns.

¹ Wherever it was necessary to generalise over both phenomena of reduplication and repetition of person markers I have referred to them collectively as ‘redundant’ person marking, although a literal sense is not implied.
To provide a few examples, reduplication of the adverb *haja* ‘in daytime’ creates an adverbial expression: *hajaha*ja ‘every day’.\(^2\) Reduplication of the root of the semantically adjectival verb *haka-* ‘to be old’ has an intensifying effect:\(^3\)

\begin{equation}
\text{haka} = h\acute{d}k\acute{a}-h\ddot{i}-\text{te}
\end{equation}

\text{old}=\text{old-nom-res}

‘very old thing’

Reduplication of the verb root *hi-* ‘move’ has a progressive aspectual effect in *hi-hi-* ‘to be on the move’. Reduplication of the verb *aru-* ‘to jump’ creates a repetitive sense ‘to hop’ in:

\begin{equation}
tei-\text{hi}-k\text{ai} \quad \text{aru} = d'\text{ru-tse}
\end{equation}

\text{one-nom-cl:leg} \quad \text{jump}=\text{jump-dec}

‘He hops on one leg.’

Reduplication of syllables has similar semantic effects. The following example shows how partial reduplication of the adverb *txarwa* ‘first, now’ emphasises that the event is very recent, ‘just now, a minute ago’:

\begin{equation}
\text{txa-txarwa-} \quad \text{hi-}\text{r\ddot{a}-ki} \quad \text{atxi} \text{txi} \quad \text{an\ddot{u}-n\ddot{n\acute{i}}}
\end{equation}

\text{red-first-intens} \quad \text{stop-dec} \quad \text{maize} \quad \text{plant-nom}

‘He’s just stopped planting maize.’

Partial reduplication of verb roots may have a progressive effect, such as in *d'n\ddot{u}*- ‘to plant’ versus *a'd'n\ddot{u}*- ‘to be planting’, or an iterative or attenuative effect, as in *kah\acute{e}*- ‘to bite’ versus:

\begin{equation}
\text{jere'xwa-tohi} \quad \text{ka-} \text{kah\acute{e}-n\ddot{k}\text{i}}
\end{equation}

\text{jaguar-small} \quad \text{red-bite-ref-dec}

‘The little dog is biting (playfully).’

Full reduplication of the verb root *kah\acute{e}*- ‘to bite’ in example (4) would carry the sense ‘to keep on biting (ferociously)’. However, a similar semantic effect cannot be

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\(^2\) All Kwazá examples in this article are from my personal fieldwork between 1995 and 2009. The orthography of the Kwaza forms is phonemic. The phoneme /j/ represents IPA [j]. The symbol <\text{x}> occurs in the phonemes /\text{x}/ and /\text{tx}/ and represents IPA [s]. The phoneme /\text{x}/ represents IPA [s]. The value of /\text{x}/ lies somewhere between IPA [i] and [e]. The symbols <\text{a}> and <\text{a}> represent IPA [a] and [a], respectively. Nasality of vowels is indicated by a tilde <\text{~}>. Even though the position of stress is generally predictable, its notation is preserved here. The apostrophe <\text{'}> indicates that the subsequent syllable carries stress.

\(^3\) Abbreviations in the glosses are listed at the end of this article. In this article, bound morphemes are separated by hyphens (–) and cliticisation and compounding by the equal sign (=). When cited in the text, a morpheme is preceded by a hyphen when it is a suffix and followed by a hyphen if it requires further morphological processes. Only free morphemes and potential word-final suffixes are not followed by a hyphen.
predicted for other roots and only few roots are attested with both partial and full reduplication. The semantic effect of the different types of reduplication seems to depend on the lexical root in particular and no systematic semantic difference was found to be connected with the formal difference between partial and full reduplication (see van der Voort 2003 for more examples).

No connection could be established between the position of the syllable in the root and the semantic effect of its reduplication. Reduplication of the last syllable of rämä- ‘to shake’ might also (similar to 4) have a slightly attenuative effect as opposed to full reduplication: rämämä- ‘to reel, dangle’ versus rämärämä- ‘to rattle’. However, final syllable reduplication is less common, and its semantic effect seems to be even less predictable than that of first syllable reduplication. For example, the apparent effect of less ‘control’ was only observed with final syllable reduplication of the verb durï- ‘to roll’ versus durï’ri- ‘to roll by itself’.

Apart from reduplication of a syllable, reduplication of a part of the syllable, or mora, was also attested, as in ’héu- ‘to sniff’ versus progressive-distributive he’héu- ‘to sniff around’. Some cases of this kind of partial verb root reduplication were attested to indicate a plural argument, such as in bui- ‘to leave’ versus bubui- ‘to leave (PL subject)’ and aruu- ‘to go across (e.g. a stream)’ versus: 4

\[(5)\]  aru-ru’nê-ki
  \begin{tabular}{l}
  CROSS-RED-REF-DEC
  \end{tabular}
  ‘They came across (hither).’

Consequently, the latter two reduplicated verbs are ungrammatical in the first person singular (indicated by the suffix -da-), *bubui-da-ki and *aru’ru-da-ki, respectively. The fact that the first person would be grammatical with he’héu- ‘to sniff around’ shows that the semantic effects of reduplication are not immediately predictable, and, therefore, that reduplication is not a single general productive process in the language. It is possible that verbs belong to specific semantic classes or are subject to certain inherent semantic restrictions that enforce a certain type of interpretation when reduplicated, but this represents an issue that would take us beyond the central focus of this article.

Many reduplicative forms are ‘inherent’ or ‘fossilised’, such as tsutsu- ‘to urinate’ and tādāi- ‘to pound’, of which no non-reduplicated versions exist. Apparently, these verbs are sound-symbolic, although most reduplicative structures in Kwaza are symbolic in some way. It is also possible that the more productive-looking reduplications are in fact regularities in the lexicon of Kwaza and point to former productive processes. The few reduplicative patterns attested in nouns are usually inherent since they occur mainly in animal names that have an onomatopoetic origin, such as dwind ‘flycatcher’, kakau ‘crow’, kurukuru ‘toad species’.

4 Note also here how the position of the mora (first or final) does not seem to play a role in the resulting semantic effect of the reduplication.
2.2 Reduplication of person marking

One of the unusual properties of Kwaza’s is the occurrence of morphologically based reduplication. This kind of reduplication does not appear to be an iconic strategy, and it is not determined by the boundaries of phonotactic units like syllables, moras, or words but by morpheme boundaries. In Kwaza’s, morphologically based reduplication almost exclusively concerns bound verbal person markers. There are at least three different types of reduplication of bound person markers: two of them indicating different sorts of past tense, and one indicating habitual aspect. Some types of person marking reduplication involve an allomorph of the canonical person marker. The table below shows the person reference forms of Kwaza (Table 1):

| Person | Pronoun | Canonical suffix | Allomorph | Meaning |
|--------|---------|-----------------|-----------|---------|
| 1S     | si      | -da-            | -dai-     | 1       |
| 1O     | si      | -ta-            | -toi-     | me      |
| 2S     | xii     | -xa-            | -xai-     | you     |
| 1INCL  | txana   | -a-             | -ai-      | we (inclusive) |
| 1EXCL  | tsitsi  | -axa-           | -ai-      | we (exclusive) |
| 2P     | xiiise  | -xaxa-          | -ai-      | you (plural) |
| 3      | i       | -cwa-           | -i/-ci-/-cu- | he, she, it, they |
| IS     | -       |                 |           | they, people, it |

The following comments should be made about Kwaza’s person reference. There are hardly any formal similarities between personal pronouns and bound person markers. Person inflection of verbs is grammatically obligatory, whereas the use of personal pronouns rather has pragmatic functions. The verb unmarked with regard to person has a third person interpretation. There is no pronominal expression of the indefinite subject.

In Kwaza’s a verb is obligatorily inflected for person and mood and can constitute a matrix sentence by itself. The structure of the Kwaza’s verb is: root + optional derivational suffixes + person marker + mood marker. The following example represents a same subject clause-chaining construction and contains overt person markers and a matrix clause volitive mood (expressing determination). The subordinate clause is in the cosubordinate mood, which indicates that it is a coordinated clause from a semantic point of view:

(6) \( waje-da-ta \)  \( 'mē-da-mē \)
    search-1S-CSO  beat-1S-VOL

‘I’m determined to track them down and beat them!’

Object marking is not obligatory in Kwaza’s, although an animate object suffix -wā is used under certain conditions on nouns and pronouns. Furthermore, bound object markers do not form a regular paradigm and have both derivational and inflectional properties. The following example shows how objects can be expressed in Kwaza’s:
There is no obligatory formal distinction between the present and the (near) past in Kwazá. The basic tense distinction is future (overtly marked by a derivational suffix -ná-) versus non-future (unmarked). In order to express past tense, explicit adverbs can be used, such as *ld'tó* ‘yesterday’, or it is clear from the context. However, there is a formal possibility to express the remote past, by reduplication of person marking. For certain persons, such as the first person singular, an allomorph is required. Example (8) below, in which the first person marker occurs only once, is contrasted with (9), in which the first person marker is reduplicated:

(8)  
*la*ó *o*ó *ja-*da-*hî*-ki  
*ze*ó*țî*u-*dį-rį̂  
‘Yesterday I went to Zezinho’s place.’

(9)  
*ja* *o*ó *ja-*da-*dį*-*hî*-ki  
*txd’rwa* *oja-*he = (bwa)-*da-*ki  
‘It has been a long time since I went there. I haven’t been there since.’

The contrast between these examples shows that reduplication of the person marker creates a remote past sense. The available data suggest that, even though there is no formal expression of the present-near past distinction in Kwazá, the construction in example (9) is used to express a remote past tense, which ranges from about a week before present up to the mythic past.

This remote past construction often has a perfect connotation, but it has not been established whether certain aspectual or temporal connotations belong to the semantic content of this construction or whether they are the result of implicature. Note in this respect that the remote past tense construction always involves a nominalising morpheme, usually the multifunctional nominaliser -hį̂. This nominaliser occurs in cleft-like constructions with progressive, perfective and non-immediate past connotations in specific situations.

The multifunctional nominaliser -hį̂ is also used as a semantically neutral classifier, and semantically specific classifiers in Kwazá also have a nominalising effect. Classifiers form an important and highly productive morphological category, and where possible, semantically specific classifiers are used. The following example shows that specific classifiers can even replace the nominaliser in the remote past construction:

(10)  
*a-*da-*dį*-*xi-*na  
*a-*e-*damį-*da-*ki  
‘I’m going to live again in the house where I used to live.’

The first word in example (10) contains a verb with reduplicated inflection which is nominalised by the classifier -xį̂ ‘house’, and its function as a locative phrase is
indicated by the locative case marker -na. This example shows that the remote past interpretation does not depend on the specific element -hī, but primarily on the reduplication of the person marker. Alternatively, the fact that co-occurrence of either a specific classifier or the neutral nominaliser is required, suggests that the remote past interpretation may also depend on the particular morphological ‘template’ structure at hand.

The above examples represent the most productive type of morphologically based reduplication in Kwaza. More examples are found in van der Voort (2003, 2004), from which the following are taken to illustrate reduplication of some of the other person markers in the remote past construction:

(11)  xi i- mā-xa 1-xāi-hī-ki
      you call-2-2-NOM-DEC
      ‘You had given him (your son, who is now grown up) his name.’

(12)  tutunicode hī-ii-cwa-hī-ki
      think-IS-IS-NOM-DEC
      ‘In olden times they worried a lot.’

(13)  tsi i-dāte a-a-āt-nāi
      girl exist-1P-1P-NOM
      ‘When we were young girls.’ (unmarried, between 15 and 20 years of age)

Example (13) shows that the adverbial nominaliser -nāi, which is never used as a classifier, can also fulfil the role of obligatory nominalising suffix in the remote past construction.

2.2.1 The evidence for morphologically based non- iconic reduplication

How can we be so certain that the reduplicative structures illustrated above represent a special morphological kind of reduplication rather than common phonotactically based reduplication of syllables as in Sect. 2.1.? The examples below with first person exclusive, second person plural and third person subjects complete the necessary evidence. They contain reduplication of the first person plural exclusive and second person plural morphemes:

(14)  aure-le-nā-axa-axa-le-hī-ki
      marry-RECI-FUT-1P.EXCL-1P.EXCL-FRUST-NOM-DEC
      ‘We were going to marry (but we didn’t, long ago).’

(15)  tsi l'cwa-axa-axa-hī-l'e  Bd'hoso te'ja
      begin-2P-2P-NOM-INT Barroso side
      ‘Did you (plural) start (opening the trail) on the side of Barroso?’
      (two years ago)

5 This example is from the life story of an elderly woman. Note that the vowels are not adjacent, but separated by glottal stops. Since the glottal stop does not represent a phoneme in Kwaza, it has not been indicated. A phonetic representation of the second word is [aʔaʔaʔnāi].
The first person plural exclusive and the second person plural morphemes consist of two syllables. In examples (14) and (15) both syllables are reduplicated because they represent one single morpheme. These examples show that the scope of reduplication is not determined by a phonologically determined unity, such as the syllable. Rather, the element to be reduplicated is determined by the boundaries of the person morpheme, disregarding the phonotactic structure. The same can be said about the unmarked, or zero-marked, third person in the remote past construction. With admirable consistency, ‘reduplication’ of this ‘morpheme’ results in zero person marking:

(16)  
\[ \text{na-}\text{a-}^i\text{w}^+ \text{o'ne-}h\text{i}\text{-ki} \]
\[ \text{PROX-that-time \ arrive-NOM-DEC} \]
‘He had arrived at that time.’ (long ago)/‘He arrived at that time.’

An equally valid characterisation of (16) would be to say that in the unmarked third person, reduplication does not apply. Whatever the analysis, the very same remote past semantic effect of person marking reduplication as in examples (9–15) can be observed in (16). Obviously, because the third person is unmarked, example (16) is ambiguous with respect to remote past tense and near past tense (‘He arrived at that time.’). Without the demonstrative adverbial this sentence would furthermore be ambiguous with regard to past and present tenses, since it could also mean ‘He is arriving.’.

The reduplicative structures discussed in this section show that the element to be reduplicated is determined by morpheme boundaries and not by phonotactic boundaries. It consists of one syllable only if it represents a morpheme that happens to consist of one syllable, two syllables if it represents a disyllabic morpheme, and no syllable at all if the morpheme it concerns is a zero-morpheme.

Arbitrary (non-iconic) reduplication is seldom attested cross-linguistically, and some linguists have suggested that reduplication is always iconic. However, because there is no basic formal distinction between near past and present in Kwažá, the reduplicative structure used to express the remote past cannot be regarded unambiguously as an iconic strategy of emphasis of a past tense. One could, similar to Stolz (2007), argue that the increased quantity in form iconically entails an increased specificity of meaning, but there is no iconic reason why that specificity of meaning should concern past tense or why it should involve person markers. Unless a mere correlation between a longer word form and a longer time period is regarded as iconic, it can be argued that there is no iconic relationship between person marking reduplication and its temporal or aspectual connotations in Kwažá.

A reason to regard the reduplicative structures here discussed as true reduplication and not as mere repetition is that they conform to Moravcsik’s (1978, p. 300)

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6 Etymologically they consist of two morphemes. They may be regarded as fixed combinations of an ‘associated person’ morpheme -xa-, combined with the first person plural morpheme -a- or the second person plural morpheme -xa-, respectively. The special nature of the associated person marker may also explain the fact that the first person plural exclusive and the second person plural markers do not have allomorphs.

7 The proximate demonstrative prefix na- in this example expresses proximity in the discourse: “that time, which is presently under discussion”.

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and Gil’s (2005, p. 37) diagnostic criterion that the semantic effect of the reduplication is not a repetition of the semantics of the non-reduplicated form. However, the phenomenon of zero-third person reduplication (as in example 16) violates Moravcsik’s criterion that the reduplicated elements be “non-null syntactic, phonological, or phonetic representations” (Moravcsik 1978, p. 300). Then again, reduplication of the other persons does not violate this criterion. Zero-third person reduplication (or, alternatively, non-applicability of reduplication when person is unmarked) should be considered as a logical consequence of the fact that we are dealing with morphologically determined reduplication, and that it concerns the particulars of an entire productive morphological paradigm.

As an anonymous reviewer observed, equal to reduplication of person markers, full reduplication of roots as discussed in Sect. 2.1. also involves morphemes in their entirety, regardless of the number of syllables they contain. Especially where verbs are concerned, the scope of the reduplication indeed respects a morphological boundary between root and inflection and thus can be regarded as morphologically determined reduplication. The present article, however, focuses on repetition and reduplication of bound inflectional morphemes, rather than lexical roots.

2.2.2 Further instances of bound person marking reduplication

Object marking in Kwazá does not constitute a fully regular paradigm, and it is doubtful whether it is inflectional at all. Nevertheless, remote past tense reduplication of the first person object marker -ta- is attested:

(17) 'x+i-dt-hū d'ha huru'ja-da-da-ta-hū-wā ca'ri = asa-ta-ta-hū-ki
   YOU-POS-NOM father like-1S-1S-NOM-AO kill=leave-DET-1O-1O-NOM-DEC
   ‘Your father had killed (from me) the one that I have loved.’

In this example, the matrix predicate has a zero-marked third person subject and, due to the detrimental sense, a first person object. Reduplication of the object marker requires the special allomorph -tai-. Reduplication of other object markers was not attested. 8

Apart from the remote past tense construction, there is a rarely attested and optional strategy to express near past tense by the morpheme -ki- (always in combination with the nominaliser -hū):

(18) nū'ri-xa-(ki)-hū-re
    satiate-2-PAST-NOM-INT
    ‘Were you full?’

This expression of near past may involve reduplication of the person marker, in which case the past element -ki- is obligatory. Here, no allomorphs are used:

8 The possibility of remote past tense reduplication in transitive verbs with a first person object and an overtly marked second person subject still awaits testing in the field. One reviewer suggested that, if in such cases the object marker is not reduplicated (as example 22 may suggest), this might imply that there is no reduplication of the zero third person marker (see example 16), and that reduplication rather affects any available target.
Near past tense involving reduplication was only attested in the first person. The only difference with the unmarked near past (cf. examples 5 and 7) seems to be that it is not ambiguous with regard to the present tense.

It seems possible that the allomorphs of person marking used in the remote past tense construction have developed from fossilisation of the rare past marker -ki- and the reduplicated person marker. The combination of -da- and -ki- may have become assimilated as -da ki-. It could be speculated that -ki- was the standard past tense marker in an earlier developmental stage of the language (like future -nâ- still is), but that it is becoming obsolete. It is difficult to imagine how the reduplication in this construction should be iconic.

A third type of morphologically based reduplication of person markers in Kwazá contributes to the expression of habitual aspect. Here, as in near past reduplication, the person allomorphs from table 1 are not used, except with indefinite subjects. Like remote-past reduplication, this is a highly productive morphological construction. Note the following examples:

(20) 
\[
(\text{ha'ja-} \tilde{s}i) \quad \text{mû} \quad \text{kûi-da-da-} \text{i} \text{t}a = \text{da-ki} \\
\text{day-ATT-SWR} \quad \text{chicha} \quad \text{drink-1S-1S-CSO=1S-DEC} \\
\text{‘(Every day) I always drink chicha.’}
\]

(21) 
\[
\text{towe-} \tilde{n}e-\text{ci-cwa-ta} = \text{cwa-ki} \\
\text{go-hither-IS-IS-CSO=IS-DEC} \\
\text{‘As usual, they returned from the forest.’}
\]

(22) 
\[
\text{do-} \tilde{t}öi-\tilde{n}i-\text{nâ-da-da-} \text{i} \text{t}a = \text{da'ni-da-hê'ki} \\
\text{leak-CL:eye-2O-1S-1S-CSO = want-1S-NOM-DEC} \\
\text{‘I will be putting drops into your eye every day.’}
\]

(23) 
\[
\text{e'ta} \quad \text{’e-} \text{-xa-}\text{t}a \quad \text{wâ’dê} \quad \text{mû} \quad \text{’kui-xa-}'hê-xa-xa-} \text{i} \text{t}a = \text{xa-re} \\
\text{woman} \quad \text{have-2-CSO} \quad \text{cook} \quad \text{chicha} \quad \text{drink-2-NOM-2-2-CSO=2-INT} \\
\text{‘What woman do you have, that you eat food and drink chicha every day?’}
\]

In the habitual reduplication construction the person marker occurs three\(^9\) times because it is embedded in a structure that is also used for quoted speech (to be explained in Sect. 3.1.). The third occurrence of the subject person marker does not represent an instance of reduplication, but of recursive derivation. Here, the embedding in a quotative structure does not have a quotative meaning. Furthermore, the embedded clause is in the cosubordinative mood, which does not have a clause-chaining function here (like it does in example 6). The embedding in the

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\(^9\) In addition to embedding and reduplication, in (23) a nominalised and then zero-verbalised verb root was inflected, hence the entire verb is marked for person even four times.
cosubordinate mood in a quotative structure just happens to be an integral part of this kind of habitual construction. The occurrence of the cosubordinate mood is not so strange here, since it may be related to another, more analytical habitual construction that also employs the cosubordinate mood. The following example shows the cosubordinate mood used in the canonical way, in a fixed expression with a- ‘to exist, to live’ as a matrix verb, conveying a habitual sense:

\[(24)\]
\[
\text{dutu're cari-tji\-rj\-da-ta 'a-da-ki}
\]
\[
\text{pig shoot-much-1S-CSO exist-1S-DEC}
\]
\['I always shoot a pig (when hunting).'
\]

The reason why a quotative construction is part of the habitual in examples (20)–(23) is more difficult to understand. One could speculate that those examples resulted from ellipsis of the verb root a- ‘to exist’, but that still leaves the person marking reduplication to explain. The quotative construction in Kwazá will be discussed in more detail in Sect. 3.1.

As in the remote past tense construction, it is debatable whether reduplication of the person marker in this habitual construction is iconic. Of course, repetition of form can be regarded as symbolic of repetition of events, just like an extended period of time could be symbolised by an extended form. However, it is unexpected that the repetitions involved in these constructions concern bound person markers, rather than (parts of) lexical roots.

Reduplication of phonotactic units is widely attested in the languages of the Guaporé region, but reduplication of person markers seems to occur only in Kwazá. It is possible that the reciprocal suffix -koko- in the Bolivian Arawakan language Baure has originated from reduplication of the absolute suffix -ko- (Danielsen 2007, p. 244). In the Bolivian isolate Movima, apparent reduplication of the absolute state suffix -kwa- conveys inalienability (Haude 2006, pp. 252–254). In other Amazonian languages there are also rare instances of reduplication of bound morphemes, e.g. in Warekena (Aikhenvald 1998, p. 351), in Paumarí (Chapman and Derbyshire 1991, pp. 207–210), and in Parecis (Rowan and Burgess 1979, p. 92; Derbyshire 1986, p. 502). In all these cases, however, it seems that the reduplication concerns syllables that match bound morphemes only coincidentally. In the work on “morphological doubling” by Inkelas and Zoll (2005, p. 29), cases of reduplication of bound morphemes are cited from the Austronesian language Gapapaiwa (McGuckin 2002, pp. 308–309) and the Papuan language Amele (Roberts 1987, 1991, pp. 128–131). However, also in these cases it could be coincidence that the reduplicated syllable perfectly matches a morpheme. Furthermore, no cases of bound morpheme reduplication with different phonotactic structures (e.g. both monosyllabic and disyllabic, as in Kwazá) were attested in any of these languages.

### 3 Repetition of person marking in the Guaporé region

In order to better understand bound morpheme reduplication constructions in Kwazá, it is worthwhile to consider other constructions in the language or in other languages of the region that involve repetition of person markers. Apart from
morphologically based reduplication of person markers, Kwazá also has recursive repetition of person markers. These constructions are semantically transparent, and their type is not unique to Kwazá. In the following subsections, repetition of person marking in Kwazá and other languages will be discussed.

3.1 Recursion of person marking in Kwazá

The way to quote speech in Kwazá involves two layers of verbal inflection. The first layer represents the quoted event and the second layer represents the event of quoting. The following example goes to illustrate this:

(25)  
kukṳ'hī-da-ki = da-ki
ill-1S-DEC=1S-DEC
‘I am/was saying that I am/was ill.’

Here, repetition of the person and mood markers does not represent reduplication. The example shows recursive application of morphology and repetition of the exact semantic content. It is possible that it originates from the elision of a verb root meaning ‘to say’. The post-inflectional cliticisation of the inflectional morphemes indicates that we are dealing with different events. This morphosyntactic construction is fully productive and can involve any of the subject person markers and mood markers in all kinds of sentence structures as shown in the following example:

(26)  
da'nī  hīhīwa-a'ni = xa-re
still  walk-1P-EXH=2-INT
‘Are we still going for a walk?’ (lit.: ‘Do you still say: ‘Let’s walk!’?’)

In the next example, the event of quoting is realised as a cosubordinated clause that expresses the purpose of the event in the matrix clause:

(27)  
pērē'jā-tjā-a'ni = da-ta  ojā'nī-da-ki
speak-TRA-1P-EXH=1S-CSO  arrive-1S-DEC
‘I came for us to talk.’ (lit.: ‘I arrive, me saying: ‘Let’s talk!’.’)

In van der Voort (2002), the construction in these examples is called the “quotative construction”. As argued there, the quotative construction forms the basis of other types of expression in which no speech is quoted. It is assumed that metaphorical use of the quotative construction has led to degrammaticalisation in the first inflectional layer (the one that is closest to the stem), which resulted in new morphemes. The inflectional morphemes in this position may function as—and may sometimes even be considered fossilised as—derivational morphemes. These morphemes are involved in the expression of intention, purpose, causation or even inanimate processes, as the following example shows:

(28)  
cari-da-he'ta-da-ki
shoot-1S-DESI-1S-DEC
‘I wanted to kill.’ (lit.: ‘I want ‘I kill.’.’)
The desiderative morpheme -heta- never occurs word-finally as a (inflectional) mood marker. It is a derivational morpheme, but its distribution is highly specific, being limited to a position between two person markers. There is no explanation for the occurrence of two person markers other than that this construction could somehow involve a quotative reading, however obsolete, metaphorical or fictive a reading that may be. The following example shows that the occurrence of a first person marker can only be understood under a quotative interpretation:

(29) 'txa kui-da-he’ta-xa-re
    tea drink-1s-DESI-2-INT
    ‘Would you like to drink tea?’ (lit.: ‘Do you want ‘I drink tea.’?)

During the morphological process that builds the verb in (29), the interactional perspective of the subject changes from hearer (addressed as ‘you’) to speaker (supposedly quoted as saying ‘I’). The desiderative suffix -heta- cannot be etymologically related to any other element in the language. The causational modal suffix -ni~, which has a similar distribution, does seem to be relatable to another morpheme. Most likely it originates from the inflectional exhortative mood marker -ni as shown in examples (26) and (27). It was only attested with zero-marked third person causees, hence the lack of a preceding person marker:

(30) 'ja kui-‘nĩ-da-ki
    already drink-CAUS-1s-DEC
    ‘I already let (him) drink.’ (approx.lit.: ‘I already said: ‘Let him drink!’.’)

Degrammaticalisation also resulted in a fossilised combination of the first person subject marker -da- and the volitive mood marker -mĩ~, which resulted in -damĩ~ with the intentional meaning ‘want’, as in (10) and (22). It can even be applied to inanimate processes that are about to occur. Compare productive first person volitional inflection in example (6) to the derivational morpheme in the following example:

(31) bwa-da’mĩ-tsẽ
    finish-want-DEC
    ‘It is about to run out.’ (the gas of the cigarette lighter)

Clearly, no actual speech is quoted in examples (26)–(31). These examples appear to show fictive interaction (a term coined by Pascual 2002), to various degrees of productivity, as a way of expressing intentions, wishes and foreseen events.

Whatever the grammatical and semantic status of the bound morphemes involved, an interpretation based on the literal meaning of their etyma does show the quotative origin of the construction in examples such as (31), the translation of which could be rephrased as ‘‘I’m going to run out!’’, it (the cigarette lighter) says’. The same cannot be claimed with regard to the temporal and aspectual constructions

10 In the possible event of plural cigarette lighters in example (31), the morpheme -da’mĩ- ‘want’ is maintained. A form based on the first person exclusive plural volitive -axa-‘mĩ would be unacceptable, since that would enforce a quotative reading. As my consultant explained: “Cigarette lighters are not people.”
involving reduplication of person marking as discussed in Sect. 2.2. The phenomena of reduplication and recursion of person markers in Kwazá do not clearly have a common origin.

3.2 Recursion of person marking in Aikaná

Aikaná is a morphologically highly complex language that is mainly suffixing. Parts of the language were described in Hinton (ed. 1993) and Vasconcelos (2003). No genetic connection with the neighbouring Kwazá language could be proven (van der Voort 2005), but the languages show several structural similarities.

In Aikaná as well as in Kwazá, verbs are obligatorily inflected for subject person, verbal third person singular marking is zero, and person markers and pronouns are not etymologically related. The basic tense distinction in Aikaná is future versus non-future, and unmarked sentences are ambiguous between past and present.11

There are also some striking differences, such as the existence of more than 10 verbal declension classes in Aikaná. Some of these declension classes require subject prefixes rather than suffixes, whereas prefixes are almost nonexistent in Kwazá. The following table shows the most frequently used person reference forms of Aikaná and include the suffixes of the default class and those of one alternative class (Table 2):

**Table 2** Person reference forms in Aikaná

| Person | Pronoun | Default class suffix | Alternative class | Meaning  |
|--------|---------|----------------------|------------------|---------|
| 1s     | (hi)/sa | -ka-                | -diza-, -dia-    | I       |
| 2s     | hźzā    | -me-                | -meza-           | you     |
| 3s     | kaf'ne  |                      | -kjêza-          | he, she, it |
| 1p     | sa'te   | -txa-               | -txiza-, -txia-  | we      |
| 2p     | hźâ('za)| -mea-              | -meza-           | you (plural) |
| 3p     | kaf'ne:ene| -dakari-             | -ka:da:kari-    | they    |

Instead of the third person pronoun kaf'ne ‘he, she, it’, a demonstrative pronoun is often used: ka'ri ‘that’, ‘that one’. Two morphemes are also given for the first person singular of the alternative class. The second one, -dia-, is an allomorph used in the future tense form of the alternative class verb

Reduplication of bound morphemes was not attested in Aikaná. However, repetition of Aikaná person markers seems to be part of the future tense construction, as the following examples suggest:12

(32)  
ha:ri-ka-ē  
bathe-1S-DEC

‘I bathed.’, ‘I’m bathing.’

(33)  
ha:ri-ka-re-ka-ē  
bathe-1S-FUT-1S-DEC

‘I will take a bath.’

---

11 In addition there are more peripheral distinctions of remote future, remote past and certain aspects that are expressed by specific derivational morphemes.

12 All Aikaná examples in this article are from my personal fieldwork in 2006 and 2008. The transcription is phonemic. The symbol <x> in /tx/ represents IPA [ʃ], <z> represents IPA [θ], and <a> represents IPA [a]. Nasality of vowels is indicated by a tilde <~>. The apostrophe <’> indicates that the subsequent syllable carries stress.
The examples above show how future tense is marked by the element -re-, which is not attested elsewhere as a word-final mood marker, preceded by a copy of the subject marker. This construction is reminiscent of some uses of the quotative construction in Kwazá, especially of the desiderative expressions in examples (28) and (29). Note that the following examples do not involve repetition of person marking, as observed in examples (33) and (35). Instead, a first person marker is inserted, where one might have expected a copy of the subject person marker. Apparently, the extra elements are limited to the first persons singular and plural only:

In examples (36)–(43) there is no repetition of person marking as in (33) and (35). The contrast between these examples indicates that the extra person marker does correspond with the subject, but only in number, not in person.

The examples of this section represent the default way to express future in Aikanâ. The literal meaning of example (39) could be ‘You people will we take a bath.’, but native speakers would not interpret it that way and would not offer the explanation given here.

No repetition of non-first persons was attested, and ‘redundant’ first person marking was not attested with any other function than future. Although no true quotative constructions similar to the ones in Kwazá were attested, the future construction in Aikanâ originates probably from an (not necessarily Aikanâ)

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13 Unlike, e.g., the causational element -ni- in Kwazá, but similar to the Kwazá desiderative morpheme -heta-. 
intentional expression, signalled by fictive quotation. There is no other reason why the future marker -re- should be preceded by an extra person marker.

The future-tense examples (37), (39), (41) and (43) suggest that the first occurrence of the person marker is the extra marker that co-determines the future tense. The second occurrence of the person marker appears to indicate the subject of the verb. Note that both person markers belong to the default declension class. The following examples are less straightforward. They contain the verb hu- ‘to drink’, which is from another declension class and involves different person marking forms:

\[(44) \text{māmā} \tilde{u} \text{ hu-čika-č} \]
\[
\text{chicha} \quad \text{drink-1S-DEC}
\]
\[
\text{‘I drank chicha.’}
\]

\[(45) \text{māmā} \tilde{u} \text{ hu-čika-č} \]
\[
\text{chicha} \quad \text{drink-1S-FUT-1S-DEC}
\]
\[
\text{‘I will drink chicha.’}
\]

\[(46) \text{māmā} \tilde{u} \text{ hu-čika-č} \]
\[
\text{chicha} \quad \text{drink-2S-DEC}
\]
\[
\text{‘You drank chicha.’}
\]

\[(47) \text{māmā} \tilde{u} \text{ hu-čika-č} \]
\[
\text{chicha} \quad \text{drink-1S-FUT-2S-DEC}
\]
\[
\text{‘You will drink chicha.’}
\]

It is important to notice two things in order to understand these examples. Firstly, in the future tense, one of the person markers represents an alternative declension, whereas the other person marker represents the default class. Secondly, in the future tense it is the extra person marker (the first one after the verb root) that represents the alternative declension, whereas the actual subject marker (the second one) now represents the default class.

The examples require us to assume that in the non-future the person marker expresses three basic categories: (a) person of subject, (b) number of subject, (c) verb class. In future expressions, there is a fourth category: tense. The first occurrence of the person marker (the extra person marker) then represents: (b) number of subject, (c) verb class, (d) tense. The second occurrence of the person marker is neutral with respect to verb class (since it is a default declension form) and represents (a) person of subject and (b) number of subject. Apparently, verb class is expressed by the person marker closest to the verb stem.

Whatever the particularities of the future in the various verb classes of Aikanā, it is striking that Aikanā has no “quotative construction” as in Kwazá, where it is used productively to express all kinds of “fictive interaction” (Pascual 2002) or “inner speech” (de Vries 1990). In Aikanā, neither quotation nor, e.g., the desiderative are expressed by such constructions. Nonetheless, the Aikanā future looks like the remnant of a much more general and productive construction. Alternatively, Aikanā never had such quotative constructions, but created a calque on a Kwazá construction, such as the volitional, which involves -dam- (as in example 31), or the desiderative, involving -heta-. Areal diffusion of constructions based on fictive interaction is also attested for the Andean region, involving Quechua, Aymara and Mapuche (Adelaar 1990) and for New Guinea, involving Dani and Awyu languages (de Vries 1990). Evidence for areal diffusion in Rondônia of other grammatical traits (e.g. classifiers, applicatives, possessives, directionals, locatives) was presented in van der Voort (2005).
3.3 Repetition of person marking in Kanôê

Kanôê is also a morphologically complex language isolate of southern Rondônia. It was described by Bacelar (2004), but many questions have not been answered yet and research and fieldwork are still ongoing. The language shares many structural similarities with Aikanâ and Kwazá, but no genetic relationships have been proven (van der Voort 2005).

Like Aikanâ and Kwazá, the language has classifiers, subject inflection, unmarked third person, etymologically unrelated first and third person markers and pronouns, and a basic tense distinction of future versus non-future. Furthermore, there is also a phenomenon that involves seemingly redundant person marking.

Like Aikanâ, but unlike Kwazá, Kanôê has declension classes and both prefixing and suffixing subject inflection.

Different from both Aikanâ and Kwazá, there is no distinction in Kanôê between singular and plural person inflection, pronouns and person markers are used for both subject and object, and the use of subject (pro)nouns seems to be obligatory.

The standard predicate structure in Kanôê involves a verb and an auxiliary, which, as will be seen below, can both be inflected for person. The predicate is usually preceded by a subject (pro)noun, and, if necessary, an object (pro)noun. The following examples show an intransitive (48) and a transitive (49) sentence in Kanôê:14

(48)   ajte    ore-ô-ri-  e-re
   we      tire-1-REF DEC-AUX
    ‘We're tired.’ (Bacelar 2004, p. 140)

(49)    pejake       aj        varâ-ô-ro-pe-to-nu        e-re
tomorrow I   speak-1-VCL-2-TRA-FUT DEC-AUX
    ‘Tomorrow I’m going to talk with you.’ (Bacelar 2004, p. 223)

In Kanôê, non-future tense distinctions seem to be intertwined with aspectual distinctions. According to Bacelar (2004), these distinctions are signalled by the presence or absence of subject person inflection in the predicate complex. The uninflected verb has both a past and a perfective/completive interpretation. In other tense-aspects, the verb does tend to carry subject inflection. Furthermore, it depends on the specific verbal subclass whether the present/progressive is expressed by either prefixation of person inflection to the predicate, suffixation to the predicate or prefixation to the auxiliary. See the contrast between the following examples:

(50)   aj        mutiri-ko-mu        itâ        e-re
I       assai-CL:seed-CL:liquid   drink       DEC-AUX
   ‘I drank chicha of assai.’ (Bacelar 2004, p. 222)

14 All Kanôê examples in this article are from Bacelar (2004). The transcription is phonemic and the symbols represent their IPA values, except for <o> and <a>, which represent IPA [ɔ] and [a], respectively.
The predicate complex in example (50) does not carry subject inflection and has a past/perfective interpretation. Example (51) shows prefixation to the auxiliary and has a present/progressive interpretation.

In one of the open verbal subclasses, subject inflection, and hence present/progressive, is expressed by both suffixation of person inflection to the predicate and prefixation to the auxiliary:

(52)  
\[
\begin{array}{lll}
aj & mapi-ka & ti-o-\ddot{a}-ka \\
\text{I} & \text{arrow-CL:hard} & \text{stretch-1-CL:hard} \\
\text{`I stretch the bow.'} & 1-DEC-AUX
\end{array}
\]  
(Bacelar 2004, p. 172)

(53)  
\[
\begin{array}{ll}
aj & pe-\ddot{o}-ja \\
\text{I} & \text{lie-1-DIR} \\
\text{`I'm lying down.'} & 1-DEC-AUX
\end{array}
\]  
(Bacelar 2004, p. 209)

(54)  
\[
\begin{array}{lll}
mi & pe-pe-ja & mi-e-re \\
you & \text{lie-2-DIR} & 2-DEC-AUX \\
\text{`You're lying down.'}
\end{array}
\]  
(Bacelar 2004, p. 209)

From the sparse relevant examples it seems that the past/perfective in this verbal subclass is expressed by a single instance of subject inflection, and that the present/progressive interpretation only holds with repeated inflection:

(55)  
\[
\begin{array}{lll}
aj & munaw & po-\ddot{a}-ro \\
\text{I} & \text{hammock} & \text{make-1-VCL} \\
\text{`I made the hammock.'} & \text{DEC-AUX}
\end{array}
\]  
(Bacelar 2004, p. 254)

(56)  
\[
\begin{array}{lll}
aj & aj-mu & po-\ddot{a}-ro \\
\text{I} & \text{leaf-CL:liquid} & \text{make-1-VCL} \\
\text{`I’m making tea.'} & 1-DEC-AUX
\end{array}
\]  
(Bacelar 2004, p. 235)

In another verbal subclass, the present/progressive is expressed by both prefixation of person inflection to the predicate and prefixation to the auxiliary:

(57)  
\[
\begin{array}{lll}
mi & pi-tej-ro & p-e-re \\
you & \text{2-transport-VCL} & 2-DEC-AUX \\
\text{`You take (the things).'}
\end{array}
\]  
(Bacelar 2004, p. 174)

From the KanoÊ examples, it seems that person marking is involved in the expression of both nuclear verbal arguments and temporal/aspectual categories. Repetition of person marking, however, seems to be an idiosyncrasy of the morphosyntax associated with particular subclasses of verbal roots in the language. KanoÊ has neither
reduplication of person markers as in Kwazá, nor a construction that is reminiscent of fictive interaction as in the Kwazá quotative and the Aikanã future. Maybe it is somewhat similar to multiple subject agreement in certain non-standard varieties of continental West-Germanic languages, such as West Flemish, where, for example complementisers are inflected (e.g. Haegeman 1992). However redundant, the repetition of person marking in Kanoe does seem to have something to do with tense and aspect, and may have resulted from areal diffusion, whatever its source.

3.4 Recursion of person marking in Wari’

Wari’ is a member of the (isolate) Chapacuran linguistic family. The Chapacuran languages are spoken in the border region of western Rondônia, Brazil and northern Bolivia. Most of the languages of this family are nearly extinct, with the exception of Wari’, which has over a thousand speakers. Wari’ was described by Everett and Kern (1997). Wari’ is an isolating language in the sense that its grammatical complexity is predominantly found in the syntax rather than in the morphology. Thus Wari’ is typologically rather different from the other languages discussed here. Wari’ employs what Everett (2008) calls ‘intentional state constructions’, in which speech is quoted directly by an extra person/tense particle, without the use of a verb ‘to say’. The same construction is also used to express future and volition, without any speech being quoted. Nevertheless, those future expressions can be interpreted literally as quotative constructions, similar to Aikanã. The following examples are from Everett and Kern (1997, p. 321):15

(58) mao ta ma?
go.S 1S.RF 2S.RP/P
‘Will you go?’ (lit. ‘I will go.’ do you (say)?’)

(59) mama xi nana hwijima
go.P 1P.INCL.RF 3P.RP children
‘The children will go.’ (lit. ‘We will go.’ the children (say).’)

Even though person marking in Wari’ does not involve bound morphemes as in the other languages discussed here, the similarities between its intentional state construction and the quotative construction of Kwazá and the future tense in Aikanã are striking. Since these languages are not genetically related, it is quite possible that the similarities in question are the result of areal diffusion.16

4 Conclusions

In this article the nature of an intriguing kind of reduplication in Kwazá is examined. Redundant person marking in past and habitual constructions described in

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15 The Wari’ examples in this article are from Everett and Kern (1997). The transcription is phonemic, in which /x/ represents IPA [tʃ], /j/ represents IPA [j], /a/ represents IPA [a], /ao/ represents IPA [ã̃]. The apostrophe ‘‘’ indicates a glottal stop [ʔ].

16 This possibility is also suggested by Everett (2008, p. 386).
Sect. 2.2. shares a number of characteristics with reduplication as we know it. However, there are also differences from reduplication as we know it, most significantly the fact that redundant person marking in Kwazá is not the result of a purely phonotactic process of reduplication. Its units are namely defined by morphological boundaries.

In order to establish whether these unusual constructions might perhaps be explained in a different way, I have tried to explore the extent to which redundant person marking in the Kwazá past tense and habitual aspect is related to repeated person marking as attested in quotative, desiderative and other modalities in Kwazá. It turns out that in the quotative constructions, the repetition of person marking can be explained from the grammatical and semantic properties of the person marking forms themselves. In these constructions, person marking is applied recursively. This is clearly excluded from Moravcsik’s (1978, p. 300) and Gil’s (2005, p. 37) definition of reduplication, according to which the process of reduplication does not repeat meaning but creates a new meaning by repetition of form. In Table 3 the features that crucially distinguish the different types of redundant person marking in Kwazá are listed:

| Table 3 Properties of redundant bound person marking in Kwazá |
|---------------------------------------------------------------|
| Property                                      | Reduplication | Recursion |
|-----------------------------------------------|---------------|-----------|
| Obligatory identical forms                    | +             | –         |
| Predictable semantics                         | –             | +         |
| Quotative interpretation                      | –             | +         |
| Change of perspective                         | –             | +         |

The table intends to show how in Kwazá recursion of person marking is a more transparent morphological operation than reduplication of person marking. Unlike reduplication, recursion is characterised by the full productive possibilities of the constituent person markers, such as a quotative reading, which allows for changes in the interactional perspective of referents. In the case of reduplication, a new meaning is created that cannot be understood on the basis of the meaning of its constituent person markers.

In an attempt to explain morphologically based reduplication in Kwazá, being a language isolate, it was also necessary to look at its unrelated neighbouring languages. The extraordinary linguistic diversity of the Guaporé region suggests an ancient history of contact, and this may have led to areal diffusion of linguistic features. There does seem to be areal diffusion of recursive person marking to express quotative and similar notions in the Guaporé region. However, no equivalent of Kwazá morphologically based reduplication has been attested in any other language, and recursive person marking in Kwazá or any other language does not seem likely to provide an explanation for morphologically based reduplication in Kwazá. Whereas an interpretation in terms of fictive interaction may explain recursive person marking in Guaporé languages (with the exception of Kanoê), similar semantic transparency is not available for reduplication of person marking,
and even an explanation with reference to iconicity may not be possible. Table 4 presents the phenomena concerning seemingly redundant person marking in the languages that were discussed in this article:

**Table 4 Phenomena concerning redundant person markers in Guaporé isolates**

| Phenomenon                  | Kwazá | Aikanã | Kanoë | Wari’ |
|-----------------------------|-------|--------|-------|-------|
| Person marking reduplication | +     | -      | -     | -     |
| Person marking recursion    | +     | +      | +     | +     |
| Fictive interaction         | +     | +      | -     | +     |
| Future interpretation       | –     | +      | –     | +     |
| Quotative use               | +     | –      | –     | +     |

This table is meant to show that morphologically based reduplication is only attested in Kwazá. There does not seem to be a correlation with recursive person marking, which is attested in all languages discussed here. Fictive interaction provides an explanation for recursive person marking in the majority of these languages, excluding Kanoë. A future interpretation of fictive interaction is attested in two of the languages, excluding Kwazá, whereas the possibility of quotative use is attested in Kwazá. Repetition of person marking in certain Kanoë verbs can neither be regarded as reduplication nor can it be explained by fictive interaction, but it may still have resulted from areal diffusion.

There is probably no answer to the question whether reduplication and repetition of person marking are related in Kwazá. If at some point in the history of Kwazá, reduplication of person markers resulted from a recursive construction involving repetition of person markers at all, that original construction must have become distorted by the effects of linguistic change through time and is now irretrievably lost. Although there is no good alternative analysis for Kwazá morphologically based reduplication, it may add a new facet to the definition of reduplication. Reduplication that is based on phonotactic units is attested almost universally in the languages of the world. Reduplication based on bound morphological units, however, is almost completely unattested. Person marking reduplication in Kwazá can be considered a rarissimum among the grammatical structures of the world’s languages, and it may be a unicum.

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Aikhenvald, A. Y. (1998). Warekena. In D. Derbyshire & G. Pullum (Eds.), *Handbook of Amazonian languages* (Vol. 4, pp. 225–439). Berlin/New York: Mouton de Gruyter.

Adelaar, W. F. H. (1990). The role of quotations in Andean discourse. In H. Pinkster & I. Genee (Eds.), *Unity in diversity: Papers presented to Simon Dik on his 50th birthday* (pp. 1–12). Dordrecht/Providence, R.I.: Foris Publications.

Bacelar, L. (2004). Gramática da língua Kanoê. Doctoral dissertation, Katholieke Universiteit Nijmegen. Accessed July 15, 2009, from http://webdoc.ubn.kun.nl/mono/b/bacelar_l/gramdal.pdf.

Chapman, S., & Derbyshire D. C. (1991). Paumarí. In D. Derbyshire & G. Pullum (Eds.), *Handbook of Amazonian languages* (Vol. 3, pp. 161–352). Berlin/New York: Mouton de Gruyter.

Danielsen, S. (2007). *Baure: An Arawak language of Bolivia*. Indigenous Languages of Latin America (ILLA) (Vol. 6). Leiden: CNWS Publications.

Derbyshire, D. (1986). Comparative survey of morphology and syntax in Brazilian Arawakan. In D. Derbyshire & G. Pullum (Eds.), *Handbook of Amazonian languages* (Vol. 1, pp. 469–566). Berlin/New York/Amsterdam: Mouton de Gruyter.

de Vries, L. (1990). Some remarks on direct quotation in Kombai. In H. Pinkster & I. Genee (Eds.), *Unity in diversity: Papers presented to Simon Dik on his 50th birthday* (pp. 291–309). Dordrecht/Providence, R.I.: Foris Publications.

Everett, D. (2008). Wari’ Intentional state constructions. In R. Van Valin (Ed.), *Investigations of the syntax-semantics-pragmatics interface*. Studies in Language Companion Series (Vol. 105, pp. 381–409). Amsterdam/Philadelphia: John Benjamins.

Everett, D., & Kern B. (1997). Wari’: *The Pacaas Novos language of Western Brazil*. London: Routledge.

Gil, D. (2005). From repetition to reduplication in Riau Indonesian. In B. Hurch (Ed.) with V. Mattes, *Studies in reduplication* (pp. 31–64). Berlin/New York: Mouton de Gruyter.

Haegeman, L. (1992). *Theory and description in generative syntax: A case study in West-Flemish*. Cambridge: Cambridge University Press.

Haude, K. (2006). *A grammar of Movima*. Doctoral dissertation, Radboud Universiteit Nijmegen. Accessed July 15, 2009, from http://webdoc.ubn.ru.nl/mono/h/haude_k/gramofmo.pdf.

Hinton, L. (Ed.). (1993). *Aikana ˜ modules: A class report based on the fieldnotes of Harvey Carlson*. Typescript. University of California, Berkeley.

Inkelas, S. (2005). Morphological doubling theory: Evidence for morphological doubling in reduplication. In B. Hurch (Ed.) with V. Mattes, *Studies on reduplication*. Empirical approaches to language typology (Vol. 28, pp. 65–88). Berlin/New York: Mouton de Gruyter.

Inkelas, S., & Zoll C. (2005). *Reduplication: Doubling in morphology*. Cambridge: Cambridge University Press.

McGuckin, C. (2002). Gapapaiwa. In J. Lynch, M. Ross, & T. Crowley (Eds.), *The Oceanic languages* (pp. 297–321) Richmond: Curzon Press.

Moravcsik, E. (1978). Reduplicative constructions. In J. H. Greenberg (Ed.), *Universals of human language* (Vol. 3, pp. 297–334). Stanford: Stanford University Press.

Pascual, E. (2002). *Imaginary trialogues. Conceptual blending and fictive interaction in criminal courts*. Doctoral dissertation, Vrije Universiteit. Accessed July 15, 2009, from http://www.lotpublications.nl/publish/articles/000287/bookpart.pdf.

Roberts, J. (1987). *Amele*. London/New York/Sydney: Croom Helm.

Roberts, J (1991). *Reduplication in Amele*. *Papers in Papuan Linguistics, 1*, 115–146.

Rowan, O., & Burgess E. (1979). Parecis grammar [ms. 132 pp., also in a Portuguese version as *Grama ˜tica Parecis*, ms. 133 pp.]

Stolz, T. (2007). Re: duplication. Iconic vs counter-iconic principles (and their areal correlates). In P. Ramat & E. Roma (Eds.), *Europe and the Mediterranean as linguistic areas: Convergences from a historical and typological perspective* (pp. 317–350). Amsterdam/Philadelphia: John Benjamins.

van der Voort, H. (2002). The quotative construction in Kwaza and its (de)grammaticalisation. In M. Crevels, S. van de Kerke, S. Meira, & H. van der Voort (Eds.), *Current studies on South American languages*. Indigenous Languages of Latin America (ILLA) (Vol. 3, pp. 307–328). Leiden: CNWS Publications.

van der Voort, H. (2003). Reduplication of person markers in Kwaza. *Acta Linguistica Hafniensia, 35*, 65–94.
van der Voort, H. (2004). *A grammar of Kwaza*, Mouton grammar library (Vol. 29). Berlin/New York: Mouton de Gruyter.

van der Voort, H. (2005). Kwaza in a comparative perspective. *International Journal of American Linguistics, 71*(4), 365–412.

Vasconcelos, I. (2003). Aspectos fonológicos e morfofonológicos da língua Aikanã. Doctoral dissertation, Universidade Federal de Alagoas.