Acquiring Complexity: The Portuguese of Some Pirahã Men

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The Pirahã language has been claimed to have no syntactic complexity. What happens when speakers of this language come into contact with another, more complex language? This paper reflects on the Portuguese used by a group of men of the Amazonian Pirahã people.

My study shows that when speaking Portuguese, most Pirahã speakers employ simple syntactic constructions, characterised by juxtaposition of main clauses rather than embedding. Yet, the more proficient speakers utilize constructions that on the surface look more complex. These involve Portuguese subordinating conjunctions and complement clauses, both instances that could be analysed as complex constructions. While the subordinating conjunctions can be explained in terms of transfer and discourse marking functions, one particular speaker uses a Portuguese complement clause that could be analysed as a syntactically intermediate structure between Pirahã juxtaposition and Portuguese embedding.

1. Introduction[1]

This paper explores the way in which complex concepts are expressed in the learner varieties of Portuguese spoken by some Pirahã men. While most members of the language community are monolingual in Pirahã, a number of middle-aged men speak basic varieties of Portuguese that they have acquired in order to communicate with outsiders. I refer to these speakers as 'gatekeepers' in the sense that they are taking over communication with the outside world and thereby act as gatekeepers within their community. The Portuguese they speak could be analysed as a pidgin, as it is aiding communication with outsiders for trade and related purposes. Yet, the speakers have very different proficiencies, and focusing on the different learner varieties is more appropriate for the purpose of this study. Essentially, some speakers only know a few words, while others are able to use a range of Portuguese constructions.

The question arises how speakers of a language with very little complexity deal with recursive structures in a second language, such as they occur in Portuguese. When speaking about 'recursion', I use the term in a general way to refer to syntactic complexity, which can be seen in the subordination of clauses. I do not wish to embark on a theoretical discussion of the concept of recursion within generative grammar. As most gatekeepers have low proficiencies in Portuguese, we would not expect much complexity in their language. Yet, there are a number of indicators of more complex 'recursive' Portuguese structures being used by Pirahã speakers.

2. Pirahã

Pirahã is the last surviving member of the Muran language family, spoken by approximately 450 native people on the Maici River in the Brazilian state of Amazonas. My corpus consists of data from two different Pirahã settlements: the majority of the data are from the village of Forquila Grande on the upper Maici River, where I conducted fieldwork. I am including additional data

[1]I am grateful to Dan Everett, Eugenie Stapert, Mike Frank, Ted Gibson, Nigel Vincent, Jeanine Treffers-Daller and Raquel Guirardello-Damian, with whom I have discussed aspects of this paper.

from one speaker from a Pirahã settlement at the mouth of the Maici River, which have been made available to me by Dan Everett, who recorded the data during his fieldwork in 2009.[2]

The Pirahã phonology is simple in that there are only three vowel phonemes and maximally seven consonant phonemes (women, it is argued, use only six consonant phonemes, Everett 1979). Yet, there is considerable allophonic variation, even across phonemes in some idiolects, e.g. between *p*, *t* and *k* in *koʔopai* - *koʔotai* - *koʔokai* 'stomach' (Everett 1986: 316). This variation is also frequent in Portuguese loanwords, which are all fully integrated into the sound system of Pirahã.[3] Pirahã has additionally two phonemic tones (Everett 1986: 312; 1979). Following Everett's (1979; 1986) conventions, I indicate the two-way phonemic tonal distinction by an acute accent on phonemic high tones, while phonemic low tones are left unmarked.

While most of the grammar of Pirahã is simple, the verbal morphology is relatively complex. The verb is not marked for tense or person, yet there are a variety of markers for mood (including evidentiality), aspect, interrogative markers, negation, incorporation and optional temporal distance markers. The latter relate the action or event to the actual time of speaking and can be roughly translated as 'when'. In (1), the temporal distance marker -*so* indicates distance from the present, i.e. the action is either taking place in the past or the future (there is no marking for whether this action is realis or irrealis):

(1) *AÍ*[4] *ka'aí* *ka'ai-o* *abá-ti* *piiboíi-**so**.*
DM house house-LOC stay-1 rain(V)-TEMP
'Well, I stay in the house if/when it is raining (lit. 'Well, in house I stay; it is raining - not the case right now').' (GK1, interviewed by JS)

This marker was originally analysed by Everett (1986: 263) as a temporal adverbial clause marker. In his more recent approach, Everett (2005: 630) still analyses -*so* as temporal, but not engaging in embedding, a point which was challenged by Nevins et al. (2009: 379). My fieldwork data on Pirahã confirm that -*so* is used to express that something is not the case at the time of speaking, either in the past or future. For this reason I refer to -*so* as a temporal distance marker (Sakel and Stapert 2010: 9). The marker is, however, optional in Pirahã and does not have to be present to express temporal relations between clauses.

Situational, aspectual or evidential suffixes in the Pirahã verb can take over roles that are commonly expressed by embedding in languages such as English. In this way, the Pirahã verbal suffix -*há* can express a meaning covered by more complex constructions in other languages, e.g. the complex English mental verb construction 'be sure that' (2) (Sakel and Stapert 2010: 8):

(2) *Hi* *kagáihiai* *koabái-p-á-**há**.*
3 jaguar kill-PERF-REM-COMP_CERT
'(I'm sure that) he shot the jaguar.'

Where languages such as Portuguese and English would use complex clause combinations, such as to express causal and temporal relationships, Pirahã merely juxtaposes two simple clauses. The relationships between these are generally deducible from the speech context. In this way, the

[2]I am grateful to Dan Everett for making these data available to me.
[3]In my transcription I give the pronunciation used by the speaker.
[4]Portuguese elements in the speech of the gatekeepers are presented in capital letters. In this example, the discourse marker *AÍ* is borrowed from Portuguese (cf. also discussion further below).

causal and simultaneous temporal relations between the two clauses in examples (1) and (3) are communicated by mere juxtaposition, without any syntactic complexity:

(3) *Piiboi-bai* *ti* *kahápi-hiaba.*
Rain-INTENS 1 go-NEG
'If it is raining I won't go.' (from Sakel and Stapert 2010: 5)

At the discourse level, Pirahã makes use of quotation markers, such as the formula *higaisai*. This marker and the quotation that follows can again be analysed as two juxtaposed clauses, in that the quotation is expressed in direct speech. This is similar to the English marker of youth speech *like* in *she was like "sure"* (Tagliamonte 2005).

The examples above show little - if any - syntactic complexity. The question as to whether there are syntactically complex structures in Pirahã, however, is highly disputed. The language is at the centre of a debate about whether its structures counterprove generally assumed linguistic universals, following Everett's (2005) claim that Pirahã lacks syntactic complexity, in particular the generative notion of recursion. This claim challenges alleged universals of human language presented by Hauser, Chomsky and Fitch (2002). There have been numerous responses to the claim over the last years, including Sakel (2007a), Slobin (2007), Nevins, Pesetsky and Rodrigues (2009) and Sakel and Stapert (2010). Some authors, including Nevins et al. (2009), have argued that Everett's older publications on Pirahã, in particular a grammatical sketch from 1986, show that the language is clearly recursive. In his claim, Everett (2005) discusses the absence of recursion and a range of other constructions in Pirahã in relation to the Immediacy of Experience Principle, which entails that the Pirahã only talk about what they have experienced themselves or what has happened to people they know. This principle, Everett (2005) says, can also be used to explain why the Pirahã have remained largely monolingual, even though they have been in contact with Portuguese-speaking outsiders for several centuries.

My findings show that monolingualism has not limited lexical borrowing from Portuguese, which can be seen in the wealth of Portuguese loanwords in Pirahã (e.g. in Everett's 1986 data). Introducing loanwords to a language does not necessarily require bilingualism, and indeed the majority of Pirahã speakers are monolingual. The bulk of Portuguese loanwords denote items introduced by outsiders, such as houses, boats, coffee and sweets. These items were referred to in Portuguese by traders and other visitors, and the Pirahã readily adopted the new words into their language, amid phonological integration.

3. Portuguese

Portuguese is a world language with approximately 178 million speakers (according to the *Ethnologue*). This number includes first language speakers only, so if we should include L2 speakers (such as the Pirahã gatekeepers) the overall number of speakers would be somewhat higher. About 80% of Portuguese speakers speak Brazilian Portuguese (Azevedo 2005: 1).

Like other Romance languages, Portuguese uses complex grammatical means to express some relationships between clauses. There are complement clauses, relative clauses and adverbial clauses. For example, to express causal relationships, Portuguese uses subordinating conjunctions such as *como*, introducing an adverbial clause:

Cf. Azevedo (2005: 131)

(4) *Como* *você* *não* *chegou* *na hora,* *a* *gente* *não* *esperou.*
like you NEG come on.time the.F people NEG wait
'Since you did not arrive on time, we did not wait.'

There are other ways in which syntactic complexity is expressed in Portuguese. Under some conditions, the verbs of Portuguese subordinate clauses appear in the subjunctive (Azevedo 2005: 139). Yet, in vernacular Brazilian Portuguese the indicative is used almost indiscriminately (Azevedo 2005: 241). This has implications for the complex constructions we can expect the Pirahã to know, as they have probably not heard the subjunctive being used much at all.

Another trait of vernacular Brazilian Portuguese is the use of simple, juxtaposed constructions in cases where more formal varieties of Portuguese would use subordinations. In this way, sequential clauses can be strung together with the sequential discourse marker *aí*. According to de Oliveira e Silva & de Macedo 1992), this marker can be described as an 'oral paragraph'. Each appearance of *aí* reflects a new sequence (or 'paragraph') in the events (5):

(5) *Aí, você encontra com um: "Agora vamos almoçar." Aí almoça, aí do almoço, já vem uma cerveja, duas, três. Aí tu emenda. Aí acaba teu dia.*
'*Then* you meet someone (and he says): "C'mon, let's go have lunch." *So then* you have lunch, *and* at lunch you start with one beer, *then* two, three. *Then* you go on and *then* your day is finished. (de Oliveira e Silva & de Macedo1992: 236-7)

4. The Portuguese Learner Varieties of the Gatekeepers

I interviewed a range of Pirahã men who I would classify as 'gatekeepers'. I furthermore analysed recordings by a film crew preparing a documentary on Dan Everett's work.[5] Overall, the Portuguese proficiency of the Pirahã gatekeepers differs, ranging from knowing a number of simple formulas to using more advanced lexical and grammatical structures. The two gatekeepers with the highest proficiency are GK1 and GK2:

- I interviewed GK1 in Forquila Grande, a village on the central Maici River. He was my main point of contact, which I attribute to the fact that he acted as the 'main gatekeeper' in the village. He always came to help out when I interviewed other gatekeepers or other speakers, unless he was otherwise occupied. His community is in regular contact with speakers of Portuguese, but this contact is usually short-lived.
- GK2 lives at the mouth of the Maici River, an area with more frequent and sustained contact with speakers of Portuguese. I evaluated video recordings of him negotiating with outsiders in front of his entire village. He stands out as the main gatekeeper of his community.

Common to all gatekeepers is the fact that the phonological structures of their learner varieties are influenced by Pirahã. Most speakers only use a very restricted number of vowels and consonants with allophonic variation, similar to Pirahã.

[5]These recording were kindly made available to me by Dan Everett.

All gatekeepers who know more than a few formulas make use of a range of Portuguese discourse markers, such as the sequential connector *aí*. This marker is used very frequently to link clauses and introduce new ideas, but it is also employed as a hesitation marker and a marker of other discourse functions. Its popularity with Pirahã speakers may be due not only to its function, but also the fact that it fits well into the phonological system of Pirahã without undergoing any sound changes.[6]

Grammatically, the learner varieties display simple structures, some of which can be traced back to the Pirahã substrate. For example, Pirahã lacks numerals (Gordon 2004, Frank et al. 2008) and expresses quantities by using a three-way distinction of 'few', 'some' and 'many'. The gatekeepers appear to transfer the conceptual system of Pirahã into the learner varieties (Sakel 2012). As an example, a gatekeeper answered the question of how many children he has using *muito* 'much, many' (6), (Sakel 2012):

(6) JS: *CUANTOS* *MENINOS* *TEM* *VOCÊ?*
how.many children have.2/3.SG you
'How many children have you got?'
GK1 ***MUIIITO!*** *eeh* *MUITO.*
many DM many
'Many, many' (GK1)

The language of the gatekeepers is also characterised by a degree of code-switching in situations where they can adopt a bilingual mode (Grosjean 2008), such as when the interviewer understands both Pirahã and Portuguese, for example (7):

(7) *AÍ* *SORRE*[7] *pi-pi-pío* *aí-sahái* *Pi* *ka'ai-o,*
DM rain.3SG water-RD-also be-NEG.IMP water house-LOC

aba'aí *TÁBA* *AÍ* *DOHMIH.*
sit table/bench DM sleep.2SG.IMP
'When it rains, and there is a lot of water, (he says) 'don't (go out) in the water, stay in the house, sit on your bench and sleep.' (GK1, interviewed by JS)

5. Complexity in Learner and Contact Varieties

Before addressing the way complexity is expressed in the learner varieties of the gatekeepers, I want to look briefly at complexity in incipient second language acquisition. According to the processability model in second language acquisition (Pienemann 1999), syntactically complex structures appear at a late stage in the acquisition process. Early learner varieties, as well as pidgins, often display simple syntactic structures with little or no embedding (Holm 1988: 6). Yet, some pidgins have been argued to have subordinate structures, but these have usually developed into expanded pidgins, used as vernaculars among the speakers, such as Tok Pisin

[6]Indeed, due to its phonology and frequent use by the Pirahã speakers I worked with, I assumed it was a native Pirahã discourse marker at first (Sakel & Stapert 2010; Sakel 2012).
[7]Portuguese elements are given in capital letters in the examples.

(Mufwene 2008: 76). Incipient pidgins, on the other hand, reply heavily on the pragmatic context instead of using grammatical structures (Mufwene 2008: 91).

Another feature common to early learner varieties is a heavy reliance on transfer for the L1 (see Lefebvre, White and Jourdan 2006). This is indeed also the case with the gatekeepers, for example in expressions of quantity (Sakel 2012), see (6) above.

A different picture emerges when looking at findings on the typology of grammatical borrowing in longer-term bilingual situations (Matras 2007; Matras and Sakel 2007a; Sakel 2007b). We see subordinating conjunctions - alongside other function words - being frequently borrowed in language contact situations, are often embedded in their source language constructions. This indicates that some complex structures are easily borrowable when speakers have a command of both languages. For example, the Amazonian language Mosetén (Mosetenan, Bolivia) has borrowed a number of Spanish subordinating conjunctions together with the Spanish strategy of embedding (8a). The Spanish strategy differs substantially from the Mosetén construction shown in (8b) in that the Spanish subordinate clause is introduced by a subordinating conjunction, while Mosetén uses a postclitic that appears on the main verb of the subordinate clause:

(8) a. *Me'-ki* **SI** *mi-in me' rais-e-' öchhe' tsin-tom ji'chhaeyiti'*
DM-CON if.SPAN 2-PL DM want-VERB-3F.O F-SUP 1PL-with study-F-S

jemoñ-e-'-ki wajkäets.
obligation-VERB-3F.O-CON equal
'Thus if you (PL) want to study here, it has to be on equal grounds (with us).'[8]

b. *Mi'-ra' wën-chhï-sh-än-**yä'** tye-baj-te-ra' yäe kerecha.*
3M.SG-IR move-DC-DS-again.M.S-AD give-again-3M.O-IR 1SG money
'If he comes back again, I'll give him his money.' (cf. Sakel 2007c: 572)

Yet, Spanish elements and their constructions borrowed into Mosetén often display different functions from their source-language originals. For example, the Spanish adverbial clause marker *hasta* 'until' is used in Mosetén to express both 'until' and 'when'. This can be explained by contact-induced grammaticalisation, where a construction can go through some changes after being replicated in another language (cf. Heine and Kuteva 2005; Matras and Sakel 2007b).

6. Complexity in the Language of the Gatekeepers

What do the gatekeepers make of the complex structures they encounter in Portuguese? We could assume that, speaking a language that does not have recursion, the gatekeepers would not use any of the Portuguese complex structures.

As expected, I found that complex relations are frequently expressed by the juxtaposition of two independent clauses, relying on the pragmatic context for clarification. However, some of the gatekeepers also make use of Portuguese subordination markers.

Starting with the first, juxtaposition of independent clauses is very frequent in my data and is used to express a wide range of meanings. For example, a causal relationship between two

[8]These data are from my own fieldwork corpus of Mosetén.

clauses can be expressed by juxtaposing the two independent clauses. The causal meaning is understood in the context of what is said, rather than marked grammatically (9):

(9) *AGORA* *NO* *NO* *CAZA* *AÍ* *DOEE* *AÍ.*
now NEG NEG Hunt.3SG DM ill.3SG DM
'Now it (the dog) is not hunting; it is ill.' (GK4, interviewed by JS)

The speaker says that 'the dog can not hunt because it is ill', which is the speaker's reply to my question if the dog will follow them on their hunt the next day. He expresses this by juxtaposing the clauses 'now he does not hunt' and 'he is ill'. The optional Portuguese sequential discourse marker *aí* appears at the end of each clause in this example and indicates that a new sequence is to follow. Likewise, a hypothetical conditional meaning can be expressed by juxtaposing two clauses, even without the use of *aí* (10):

(10) *AGORA* *EU* *NÃO* *PODE,* *EU* *NÃO* *VOADERIA*
now I NEG can.3SG I NEG motorboat

PARA *NA* *PONTE* *VOADEIRA* *UM* *DIA* *CHEGA* *LA.*
for to.the.F bridge motorboat one.M day come.3SG there
'Now, I can't (go there), I don't have a motorboat to go to the bridge. If I had a motorboat I could go there one day.' (GK2, interviewed by DE)[9]

The overall meaning in (9) and (10) is deducible from the speech context, but in other cases, the context is not enough to reveal the exact intended meaning of the juxtaposition of two clauses. For example, the last clause in (11) could be understood as 'it is good to eat' or 'it is good, I eat it'. Only the use of the sequential discourse marker *aí* suggests that the second reading is more appropriate, as *aí* appears before a new sequence:

(11) JS: *VOCE* *GOSTA* *DE* *PEIXE?*
you like.2SG of fish
'Do you like fish?'
GK4: *GÓOTO,* *BO'II* *EE* *ELE* *BOO* *AÍ* *COMII.*
like.1SG good DM he good DM eat
'I like (it). It is good. It is good to eat (or: 'it is good, I eat it').'
(GK4, interviewed by JS)

The strategy of juxtaposing two clauses can also be used when dealing with verbs such as 'want', which would be expressed by a complement clause in target-like Portuguese (12):

[9]Examples 10, 12, 13 and 14 were recorded by Dan Everett at the Pirahã settlement at mouth of the River Maici in 2009.

(12) *AGORA DEIXA CIMI. CIMI ENTRAR. EU QUERO.*
now leave.3SG CIMI CIMI enter.INF I want.1SG
'CIMI has now left, but I want it to come back.' (GK2, interviewed by DE)

Example (12), expressed by the proficient GK2, consists of three simple clauses, one after the other: the first one gives the setting 'CIMI (an organisation) is leaving now', the next gives the wish 'CIMI to enter', followed by 'I want (it)'. Intonation presents us with a vital clue in this case, as the latter part of the example appears almost like an afterthought, and instead of expressing this as a complement clause as in Portuguese, the main clause 'I want (it)' is juxtaposed to the subordinate clause 'CIMI enters'. However, a point to consider is the use of the infinitive form *entrar* in the example. As we are dealing with one of the most proficient speakers, I would have expected him to use the finite verb form *entra* in a simple clause, in particular since this speaker uses the appropriate inflections in other contexts, e.g. *deixa* 'it leaves' and *quero* 'I want'.[10] Admittedly, the two forms *entrar* 'enter.INF' and *entra* 'enter.3SG' are very close in pronunciation, and the speaker may have used the infinitive assuming it was a finite verb form. This possibility aside, we may have an indication that we are dealing with more than just juxtaposition, arising complexity in the Portuguese of a gatekeeper, using a non-finite clause as a complement to the verb 'to want'. In this case, we would observe that the resulting construction is very different from the Portuguese source. Yet, it would be expected, in line with contact-induced grammaticalisation in other contact situations (Heine and Kuteva 2005; see also the discussion on Mosetén above).

The same proficient speaker uses *querer* 'want' in another way, which again suggests we are dealing with more than juxtaposition. In this case, the construction looks suspiciously like a complement clause (13):

(13) *MA EU QUERIA SO CIMI MESMO VOCE TRABALHA*
but I want.COND.1SG only CIMI itself you work.2SG

*LA PONTE', NE'? **QUERÍA** **VIR** AQUI, NE'?*
there bridge TAG want.COND.1SG come.INF here TAG
'But I would only want CIMI itself. You work there, at the bridge (i.e. in the other Pirahã village), right? I would want you to come here, okay?' (GK2, interviewed by DE)

In (13) the verb 'want' is in the conditional, followed by a second verb in the infinitive. Such a construction is commonly used by a range of gatekeepers. In these examples, the verbs always have the same subject as a catenative verb construction (14):[11]

(14) *AÍ EU **QUERÍA** **FALAR** ASSIM PARENTE.*
DM I want.COND.1SG talk.INF like.this friend
'That's what I wanted to say, friend.' (GK2, interviewed by DE)

[10]Cf., however, example (10), where the same gatekeeper uses the 3rd person singular form *pode* with the first person pronoun *eu*.
[11]Other examples are modal verbs + infinitive constructions. In my data these are *pode vir* 'can come', *pode quee* 'can stay', *pode aader* 'can walk' and *tene preeder Pirahã* 'must learn Pirahã'. These were probably first acquired as formulas (in terms of Wray 2002).

Yet, the catenative verb construction of the type 'you would want to come here' is not a likely reading for (13).[12] Rather, throughout the conversation, the gatekeepers tries to convince his Brazilian interlocutor that he wants the organisation (CIMI) to come to the area. The most likely reading for (13) is thus 'I want CIMI to come here', which is a complement clause in that the subject of 'want' is different from the subject of 'come'. In favour of this analysis is that the finite verb form *quería* is in the 1st person singular,[13] and that this speaker generally uses the appropriate inflections in finite verbs.

When we compare this construction to complementation in Portuguese, various differences become apparent. The latter appears with an overt complementizer *que* and an inflected subordinate verb form. Furthermore, an overt personal pronoun is present where the referential context is not entirely clear. The construction in (13) is thus not target-like, but a manifestation of GK2's interlanguage, undergoing a form of contact-induced grammaticalisation. I suspect that this example has its roots in catenative verb constructions as in (14), which were then extended to be used for different subjects. So far, however, this is the only example I have found in my data.

While juxtaposition of clauses alone can express complex constructions, many gatekeepers also use three Portuguese subordination markers: *porque* 'because', *quando* 'when' and *por isso* 'therefore'.

I have only two examples of *porque* 'because', both uttered by the same speaker in close succession as parts of question-answer pairs as in (15), and hence not examples of embedding:

(15) JS: *PORQUE* *FAZ* *CAMINHO?*
why make path
'Why are you making a path?'

GK3: ***PORQUE*** *káriki* *MEDO* *POR-A* *KOBRE.*
because foreigner afraid for-the.F snake
'Because the foreigner is afraid of snakes.' (GK3, interviewed by JS)

In the same way as *porque*, the reason marker *por isso* 'therefore' is used by a gatekeeper (in this case one of the most proficient speakers). In (16) the gatekeeper uses it to explain why he would never go to Humaitá, the nearest city, by boat:

(16) *AÍ* *NAO* *PODE* *HEBAR* *CANOA* *AQUI,* *NA* *RIO;* *AQUI* *MUITO*
DM NEG can.3SG bring.INF small.boat here on.F river here very

FUSSE *POSSO* *AOTO* *CORRE.* *AÍ* *AQUI* *MUITO* *BARRERE*
strong pull.3SG strong flow DM here many barriers

[12]In some dialects of English the phrase *you'll want to come* could be understood as 'you should come' or 'I want you to come', i.e. little to do with the wishes of the listener, but rather those of the speaker. This reading is not possible in Brazilian Portuguese and it is thus unlikely to be the interpretation in this example.

[13]For the sake of completeness the reader should notice that due to paradigm syncretism this is also the form of the 3rd person singular conditional, though in this context there is no likely antecedent for a 3rd person singular.

AÍ;	***POR ISSO***	*NAO*	*PODE*	*ADAAR*	*CANOA,*
DM	therefore	NEG	can.3SG	go.SG	small.boat

AÍ	*MAOSA CRUZADA*	*AYÍ*	*POO.*
DM	big.boat	DM	can.3SG

'One can not go there (*aqui* 'here' is used) by small boat, here on the river, there is a very strong current and flow, there are my barriers (obstructions). Therefore on can not go by small boat – (but) the big boat can.' (GK1, interviewed by JS)

The marker *por isso* takes the preceding statements as its antecedent, and could be analysed as a marker of syntactic embedding. However, *por isso* is often used as a conclusive discourse marker in Portuguese (similar to the English marker *so*), appearing at the beginning of an utterance. This type of marker could appear with or without an antecedent, but rather than being a case of syntactic complexity, it could be analysed as subordinate to the pragmatic context (cf. Schiffrin 1988: 191ff). I think that this is the most likely reading in this case, which is also supported by the intonation in this example. Yet, this use of *por isso* in (16) is only a small step away from a syntactically complex construction.

Out of the three possible subordination markers in my corpus, *quando* 'when' occurs most frequently, in most cases uttered by the proficient speaker GK1. Example (17) shows the temporal marker *quando* 'when' being used between two clauses:

(17)

Ti,	*Tiihoá*	*iga-ati,*	*CAMÍSA!*	***QUANDO***	*AMÉRICA*
1SG	Jeanette	take-UNCERT	shirt	when	America

CHEGOU,	*TRAE*	*CAMEESA*	*DESSE.*
go.PAST.3SG	bring.2SG.IMP	shirt	of.this

'I, Jeanette, would take that shirt! When you go away, bring me this shirt.'[14]
(GK1, interviewed by JS)

In (17) *quando* refers to an event or action that is not the case at the time of speaking. In that way, its use overlaps in meaning with the Pirahã temporal distance marker -*so*. It is highly likely that rather than using *quando* in its Portuguese sense, the gatekeeper transfers the functions of -*so* to its Portuguese equivalent. This would mean that even though an adverbial clause marker is used in (17), the example does not show a subordinate structure. It merely follows the system of Pirahã temporal distance marking. Another example of possible transfer due to an overlap in meaning between *quando* and -*so* is (18) (from Sakel and Stapert 2010: 9):

(18)

AÍ	*AÍ*	*AQUI*	*his-o*	*KEECHE*	***QUAADO***	*AQUI*	*his-o*
DM	DM	here	sun-LOC	hot	when	here	sun- LOC

[14]The translation of (16) is ambiguous, as the verb *chegar* 'go away', can both mean 'go there' and 'come here' in the pidgin, while *traer* 'bring' can also mean 'give'.

FRÍO	*AÍ*	*kaba*	*QUEEMA*	*AÍ*	*AÍ*	*MUITO*	*BRAACO.*
cold	DM	NEG	burn.3SG	DM	DM	very	white

'It is hot here in the sun. When it is cold here in the sun, you do not burn. (You are) very white.' (GK1, interviewed by JS)

Yet, the use of *quando* by GK1 does not always merely follow the Pirahã pattern. In (19), *quando* is used to contrast two hypothetical situations without directly relating them to the speech context:[15]

(19)

Maabi	*hiaba,*	*EETÁ*	*BOM,*	*maabi*	*hiaba.*	***QUAADO***	*NOEETJE*	*PIRAI*
bad	NEG	is	well	bad	NEG	when	ill	Pirahã

SABA	*ibaaba;*	***QUAADO***	*BOO*	*AÍ*	*PIRAI*	*HABA*	*ibaabi*	*hiaba.*
say.3SG	ill	when	good	DM	Pirahã	say.3SG	ill	NEG

' "(It is) not bad", it is good, "not bad". When ill, the Pirahã say "(it is) ill". When well, the Pirahã say "(it is) not ill".' (GK1, interviewed by JS)

This example (19) could be seen as a step away from the transferred Pirahã structure based on the temporal distance marker *-so*. Yet, there is no convincing case to be made that this is a syntactically complex structure.

7. Discussion and Conclusion

My findings show that some degree of syntactic complexity can indeed enter the language of speakers with a syntactically simple L1 that is in contact with a more complex L2. Yet, the majority of gatekeepers only use simple constructions in their Portuguese learner varieties, in line with findings from other early learner varieties and pidgins. They generally juxtapose simple clauses to express complex concepts, relying on the pragmatic context to clarify what is meant. Even a variety of cases where gatekeepers use Portuguese subordinating conjunctions cannot be argued to be complex structures. For example, the conjunctions *por isso* 'therefore' and *porque* 'because' are used as discourse markers in the learner varieties. The properties of the marker *quando* 'when' can, at least in part, be explained in terms of conceptual transfer from Pirahã.

It is not surprising to find little syntactic complexity in the language of the gatekeepers, as even the vernacular Brazilian Portuguese input uses simple constructions, where more formal language varieties would employ subordinations.

Yet, my data show that one speaker, GK2, uses a complement clause which appears suspiciously complex. It can be analysed as an extension of a catenative verb construction and could allow for an analysis as a syntactically complex structure. The resulting construction is not similar to the target-like Portuguese way of expressing complementation. Rather, the construction is intermediate between Pirahã and Portuguese, arguably undergoing contact-induced grammaticalisation. The gatekeeper who uses this construction is one of the most proficient Portuguese speakers among the Pirahã and he is in regular contact with outsiders. The

[15]The code-switches in this example appear because the gatekeeper explains the meanings of two Pirahã words to me.

arising syntactic complexity in his variety of Portuguese is probably something that we will eventually also see in other speakers as well. This is because the language situation in the Pirahã region is likely to change considerably over the coming years, due to prolonged contact with the outside world, including a new hospital and education projects. The Portuguese proficiency of the gatekeepers is likely to increase, and with it - more than likely - also the complexity of their learner varieties.

Abbreviations

1: 1ST PERSON; 2: 2ND PERSON; 3: 3RD PERSON; AD: ADESSIVE RELATION 'AT'; AMC: ASSOCIATED MOTION 'DO AN ACTION ON THE WAY TO THE DEICTIC CENTRE'; AMS: ASSOCIATED MOTION 'DO AN ACTION AFTER ARRIVAL TO THE DEICTIC CENTRE'; COMP_CERT: COMPLETE CERTAINTY; CON: CONTRASTIVE CONNECTOR; COND: CONDITIONAL; DEF: DEFINITE ARTICLE; DM: DISCOURSE MARKER; F: FEMININE; GK: GATEKEEPER, FOLLOWED BY INDIVIDUAL IDENTIFICATION NUMBER; IMP: IMPERATIVE; INF: INFINITIVE; INTENS: INTENSIFIER; INTENT: INTENTION; IR: IRREALIS; LOC: LOCATIVE; M: MASCULINE; NEG: NEGATION; NEG.IMP: NEGATIVE IMPERATIVE; O: OBJECT; PAST: PAST TENSE; PERF: PERFECTIVE; PL: PLURAL; REL_CERT: RELATIVE CERTAINTY; REM: REMOTE; RD: REDUPLICATION; S: SUBJECT; SG: SINGULAR; SPAN: SPANISH FORM; SUP: SUPERESSIVE RELATION 'ON'; TAG: TAG QUESTION MARKER; TEMP: TEMPORAL RELATIONAL MARKER; UNCERT: UNCERTAINTY; VERB: VERBALIZER.

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