

Appendix B

Inter-annotator assessment procedure

The aim of this appendix is to give a more detailed insight into the proceedings of the inter-annotator assessment. With the co-annotator, I conducted a training phase, followed by the annotation of some data from the ACQ-DIV corpus. Finally, I calculated the reliability and the percent agreement of these annotations.

B.1 File handling

The co-annotator and I had access to a shared folder on Switchdrive (see <https://www.switch.ch/drive/>, last accessed 15 Nov. 2021). The folder structure and main files are depicted in Figure B.1. The figure shows that the annotation of cases (repair sequences) and the annotation of types (types of repair other-initiations) were chronologically and conceptually separated.

Accordingly, there were two separate annotation schemes (one per annotation step). These were still heavily based on the coding scheme developed by Prof. Dr. Mark Dingemanse and kindly provided by Prof. Dr. Sabine Stoll. The only deviation was that some additional comments or specifications were included, especially with respect to the specific data at hand (for comparison, the full and original annotation scheme can be viewed on pp. 124ff.).

The folders with the files to be annotated contained .eaf-files along with the original audiovisual data. I had added an additional tier for annotating the cases (codes: T-1, T0, and T+1), and an additional tier for annotating the types (codes: 0, 1, 2, and 3). Figure B.2 gives an overview of the tiers that

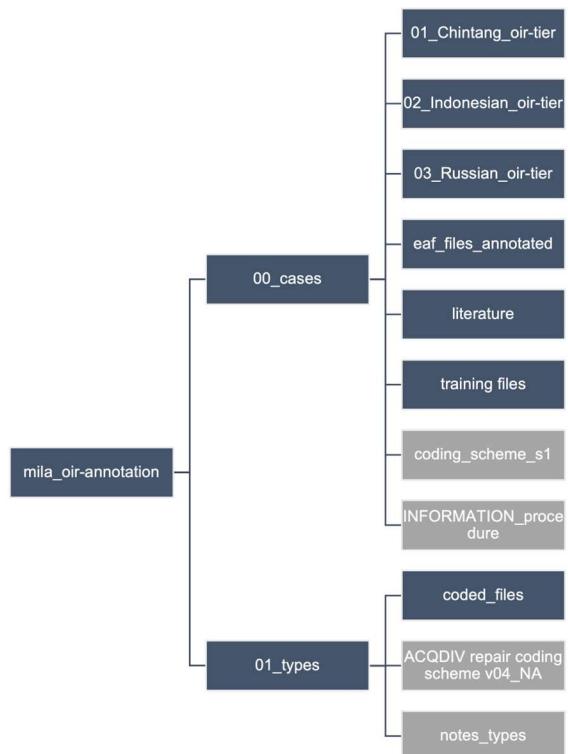


Figure B.1: File structure of the shared Switchdrive folder for conducting the inter-annotator assessment. Dark grey indicates folders, light grey indicates files.

were already available in the Chintang subcorpus, the Indonesian subcorpus, and the Russian subcorpus. There were slight deviations in a few files, but the original utterance and the translated utterance were consistently available. As of March 2021, automatically generated Russian translations were available and I was able to use them.

The following four files were relevant for the annotation, as they contain all the instructions on which the inter-annotator assessment was based. They were also discussed in Zoom meetings.

File: coding_scheme_s1

This scheme is largely based on Mark Dingemanse's original file, but it contains some additional notes. Further, I removed the information from the original coding scheme which related to the typology of OIR (as this was reserved for a second annotation round, and was intended not to influence the annotation of the first).

Other-Initiated Repair in Children's Language Acquisition

Coding scheme for other-initiated repair

Definition in Dingemanse (n.y, v03, not published)¹

"Other-initiated repair. A sequence in which a repair initiation in turn T0 signals some trouble in a prior turn T-1 and is treated as making relevant the provision or ratification of a repair solution in a next turn T+1. T0 and T+1 together form a side sequence that temporarily halts the conversation."

Terminology: repair initiation —> T0----- repair = repair sequence —> T-1, T0, T+1

What do we code as repair?

We want to identify all instances of 3-turn repair sequences (complete: T-1, T0, and T+1 / incomplete: T-1 and T0) to which the above definition applies.

- If the repair sequence is not completed after 3 turns, we do not code the sequence at all (these are longer repair chains which can be analyzed in another project Ⓜ).
- We look for instances whose **form** corresponds to this definition: We do not interpret the speakers' intention, but rather look for what could be treated as a repair initiation based on the linguistic form of the utterance and on the meta-information we find in the other tiers.
- The codes T-1 and T0 are **necessary**: A T0 may only be given if there is a clear previous turn it relates to (see specifications below), and a T-1 may only be given if clearly followed by a T0 (this is kind of self-explanatory, given that any utterance could be subject to a repair initiation). T+1 is **optional**: It may be coded if it clearly relates to T-1 and T0, but it is also possible that the repair initiation is not followed by a repair solution.
- It is thus crucial that we do not consider T+1 to decide whether the previous utterances are T-1 and T0, given that it is an optional element. The question is rather: **could the form of this utterance be taken up as signalling trouble and ...** (according to def.)?
 - Because broadly speaking, repairs could also have other functions, especially in child language acquisition. For instance, it could express surprise (I went to the store – You went to the store?), be a polite way of correction, etc. Because these functions all sort of merge into each other and we cannot and do not want to distinguish intention in the data, we look for the forms.
- Relation between T-1 and T0: Depends on the type of repair initiation – if it's an open question such as *huh? what?* etc., we assume it relates to the turn right before. So we take sequentiality of discourse into account here. We code the utterance closest to the T0 in this case (in case directedness is given). If there is more than one candidate utterance for T-1 (e.g. because two speakers uttered something similar at once) and the target of the T0 is not definitely clear (either through the course of the conversation or through meta-information from TOS-tiers), we do not code it. If, on the other hand, it is a question that is semantically restricted (e.g. a closed question), the relation between T-1 and T0 is to be decided in terms of linguistic information of the single utterance (e.g. semantics, lexis...).
- Relation between T+1 and T0, T-1: We code T+1 if we can say it is clearly a ratification of the T0. Either a repetition or a correction (it is also possible that something is repeated in a more elaborate way), or a confirmation / negation. If this is not the case, we do not code T+1.

Commented [NA1]: note that we do not have phonological information

Commented [NA2]: implicit does not count of course

What do we NOT code as repair?

Here are three things that may look like repair but aren't:

- Incredulous news receipts like "Really?" do not indicate a trouble in understanding, but are a conventionalized way of showing surprise, and they are not repair.

Commented [NA3]: (note that a clear expression of surprise such as *really?* is still not a repair, as noted in Dingemanse's repair scheme.)

¹ Which is based on: Dingemanse M, Enfield NJ. Other-initiated repair across languages: towards a typology of conversational structures. *Open Linguistics*. 2015;1: 98–118. doi:10.2478/opli-2014-0007; Dingemanse M, Roberts SG, Baranova J, Blythe J, Drew P, Floyd S, et al. Universal Principles in the Repair of Communication Problems. *PLOS ONE*. 2015;10: e0136100. doi:10.1371/journal.pone.0136100; Dingemanse M, Kendrick KH, Enfield NJ. A coding scheme for other-initiated repair across languages. *Open Linguistics*. 2016;2: 35–46. doi:10.1515/opli-2016-0002

- Tell-me-more questions respond to T-1 (e.g. 'When did that happen?'), but do not halt the conversation to signal and solve a trouble in understanding, so they are not repair.
- Broad questions like "Why?" and "What's the matter?" do not indicate a trouble in understanding the prior turn as such, so they are not repair" (Dingemanse, n. y., v03, n. p.).

"Code conservatively using the conference talk principle: only code as [codes] if you are happy to use the case as an example in a conference talk. Err on the side of caution" (Dingemanse, n. y., v03, n. p.).

Additionally:

- sequences where one or more of the two to three turns contain missing parts, such as xxx, merely a question mark, a 0, etc. (this includes the original utterance tier as well as the translation tier, where in a few cases xxx was translated to huh).
- open questions as answers to a call, such as Dad? – huh? – etc. these do not signal trouble in understanding but attention (exception to the form-rule above).
- when the directedness between turns is not given.

Conventions

- code for all speakers (not just children)
- code at utterance level: T-1, T0, T+1
- no more than one code per utterance
- Sometimes speaker A will utter two or more utterances in a row, followed by two or more utterances, and so on.
 - Speaker A: This is great.
 - Speaker A: This is really great. → T-1
 - Speaker B: What?
 - Speaker B: What did you say? → T0
 - Speaker A: I said it's great. → T+1
 - Speaker A: It's really great.
- the original utterances, the comment tiers etc. can be consulted as well.
- it is possible that there are a few turns in between, for instance between T0 and T+1; this should be considered when looking for candidates for each code.
- especially in the larger files it is sometimes difficult to deduct the directedness of an utterance (e.g. because it is merely 'adult' directed). In those cases, if we cannot deduct the directedness sequence-wise and/or in terms of content, we do not code it.

Other-Initiated Repair in Children's Language Acquisition

Appendix (Screenshot from Dingemanse's (n.y, v03, not published) coding scheme, where examples were taken from Dingemanse et al., 2015)

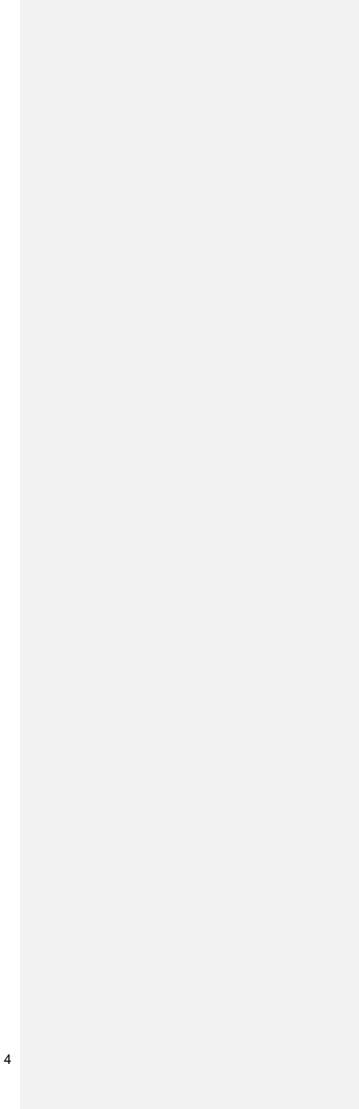
Examples of what is NOT repair

0 not repair	
here <i>let me take some rice, okay?</i> okay.	T0 does not appear to signal any trouble in T-1, but instead issues a request which is granted by A in T+1. No evidence of trouble, and T+1 doesn't redo or clarify T-1.
where's the daddy? <i>where?</i> the daddy is gone to the market	A asks a question in T-1 and answers it in T+1. The question at T0 appears to repeat part of T-1 but does not pick out part of it as problematic; nor is it treated as such by A in T+1.
hammer <i>and a hammer is for what?</i> for nails	T0 asks for additional information about T-1, but does not indicate a trouble in hearing or understanding.
huh? <i>you're done taking a bath right?</i> eat, eat.	These turns do not appear to form a coherent sequence. It is not possible to see T0 as initiating repair on T-1, or T+1 as providing a repair solution.
xx drink <i>look, what does he drink?</i> milk	While T0 seems to pick out something in T-1 and is answered in T+1, the "look"-preface of T0 suggests it is a new Q&A sequence and not repair. Seeing more context might help, but based on this info it is not clearly repair.

Other-Initiated Repair in Children's Language Acquisition

Examples of what IS repair

Ch'apala (Floyd)	<i>demanperce yumaaz</i> Turn (it) off now mm mm? <i>cocina demanperse</i> Turn the stove off.	<i>apao aamama'jumu kaa chpijicha</i> youmaa lluñetseñakaa father, there by grandma the madrasas are getting ripe nukas what? <i>etu aamama'jumu i(pointing)j</i> here by grandma	weemujusha, santsa mar- santa in other places, in Santa Mar- Santa Maria they say they are buying them at a dollar and a half baskets? jee yes
Italian (Rossi)	<i>la (fa-) scade domani sera</i> it (fa-) it expires tomorrow night? ah huh? <i>la scade domani sera!</i> it expires tomorrow (night)?	<i>non ho ancora iniziato ad usarla</i> I haven't yet started using it cosa what? <i>la coincidenza scientifica</i> the scientific calculator <i>la coincidenza scientifica</i> it expires tomorrow (night)?	<i>con un po' di olio è più buona se</i> <i>vuoi</i> with a bit of oil it's better if you like olio off mb mb
Lao (Enfield)	<i>qan3 qan3 qan3 vaj4</i> put (them) away, put [them] away ha2 huh? <i>qan3 vaj4</i> put (them) away	<i>bó1 mít2 tsáke vaa3</i> Don't you have any rope? tsáke fang3 Rope (for) what? <i>tsák4 mat4 huuŋ2</i> put (them) away	<i>bó1 i hou4 cak2 mong4 man2</i> (We) didn't know where it was. daan3 ngou2 Daan Ngou? qee5 Yeah.
Mandarin (Kendrick)	<i>nǐ yóu gōngkè ma</i> do you have homework? hmm hm? <i>jīn tiān yóu méi yóu gōngkè</i> do you have homework today?	<i>nǐ zhídào lièréng ma</i> do you know hunter? zhídào hérfēn what hunter? <i>mánhuà x</i> the cartoon	<i>jiù dà ge jīchéngché, bā shí ma</i> need to pay a taxi, eighty dollars <i>nǐ shí shuò yǒng póngguǎn jiéyún</i> zhán guò lái you're saying you came from Gongguan subway station? <i>bù shí wǒ shí cóng kějí dálóu</i> no, I came from the Technology Building
Russian (Baranova)	<i>ej sko?ka let ta?</i> How old is she? a? huh? <i>ej sko?ka let ta eta?~</i> How old is she, this one?	<i>Vor'mite zafra ejo</i> Take her tomorrow kavo who? <i>Ta miu</i> Tanya.	<i>U ja doch eh vysla zamuzh, radila.</i> Her daughter got married, Their daughter um got married, had a child and now they need, they will go there. v Azorsk? to Ozersk? v Oziorsk? to Oziorsk.
Shiu (Dingemans)	<i>s si 3 de 3 sare si > kpi</i> she should be responsible if he dies m? <i>s2 3 si 3 de 3 sare</i> that she should be responsible	<i>Mikell 3</i> It's Michael's. Ana mikell? Which Michael? <i>oh, t3 zre- t3 zre zbi Mikell.</i> oh, your father- you father's son Michael .	<i>na mer zhui? jelp?</i> is there still some (in the house)? pô nota: purified water? ži. yeah.
Yell Dnye (Levinson)	<i>daa wa ma ngmê</i> will they eat it? aa? huh? <i>daa wa ma ngmê</i> will they eat it?	<i>mu tpile daa wa ma ngmê, apil</i> They cannot eat that thing right? Id tpile? what thing? <i>mu tpile taataa</i> that red thing	<i>open ja këksä, mylmi ndapi.</i> the replacement big kë shell and the marriage shells mylmi ndapi? marriage shells? nyäš yes



4

target table	target field	source	target table	target field	source tier
sessions	session_id_fk	file name	sessions	session_id_fk	file name
utterances	utterance_id	\ref	utterances	utterance_id	\ref
utterances	start	\ELANBegin	utterances	start_raw	\begin
utterances	end	\ELANEnd	utterances	end_raw	-
utterances	speaker_label	\ELANParticipant	utterances	speaker_label	\sp
utterances	addressee	\tos	utterances	addressee	-
utterances	childirected	\tos	utterances	sentence_type	utterance delimiter on \nep
utterances	sentence_type	utterance delimiter on \nep	utterances	utterance_raw	\tx
utterances	utterance_raw	\gw	utterances	translation	\ft
utterances	translation	\eng	utterances	comment	\nt
utterances	comment	\comment	words	word	\tx
words	word	\gw	morphemes	morpheme	\mb
morphemes	morpheme	\mph	morphemes	gloss_raw	\ge
morphemes	gloss_raw	\mgl	morphemes	pos_raw	-
morphemes	pos_raw	\ps	morphemes	morpheme language	\lg

target table	target field	source tier
sessions	session_id_fk	file name
utterances	utterance_id	\ref
utterances	start_raw	\ELANBegin
utterances	end_raw	\ELANEnd
utterances	speaker_label	\EUDICOP
utterances	addressee	\add
utterances	utterance_raw	\text
utterances	sentence_type	utterance delimiter on \text
utterances	comment	\act, \com, \ct, \err, \sit
words	word	\text
morphemes	morpheme	\lem
morphemes	gloss_raw	\mor
morphemes	pos_raw	\mor
morphemes	morpheme language	\mor, special gloss FOREIGN

Figure B.2: Chintang tiers (upper left), Indonesian tiers (upper right), and Russian tiers (lower center) (Schikowski et al., 2019, p. 47, 51, 60, resp.).

File: INFORMATION_procedure

All of the needed files are in the following Switchdrive-folder: [link]

There, you can find the .eaf-files and the corresponding media-files. Unfortunately, not all eaf-files were aligned with the media files in terms of time stamps. For these videos, if you need to see or hear the media file, you can either look for the precise time stamp in the acqdiv database or drop me a line and I will look the real time stamp up for you.

You will code a total of 8 sessions, in part or entirely (162 Minutes overall / 54 Minutes per language):

- CLLDCh1R04S01_oir (Chintang)
- CLLDCh1R04S02_oir (Chintang)
- CLLDCh2R01S01a_oir (Chintang)
- MIC-2000-12-11_oir (Indonesian)
- MIC-2000-12-16_oir (Indonesian)
- RIS-2000-03-04_oir (Indonesian)
- A06030102_oir (Russian)
- J09050117_oir (Russian)

Each of these files contains one tier for OIR (oir) codes per speaker. There, you can add the codes from the coding system.

Because in some of the files, the time alignment is displaced and some are only used to fill up the time, here is some specific information on how much to code per file:

- CLLDCh1R04S01_oir (Chintang): Time-alignment on point. We code the entire file.
- CLLDCh1R04S02_oir (Chintang): Time-alignment on point. We code up to 00:01:00.
- CLLDCh2R01S01a_oir (Chintang): Time-alignment on point. We code up to 00:27:00.
- MIC-2000-12-11_oir (Indonesian): Time-alignment displaced. We code up to 00:01:12.

- MIC-2000-12-16_oir (Indonesian): Time-alignment displaced. We code the entire file.
- RIS-2000-03-04_oir (Indonesian): Time-alignment displaced. We code up to 00:22:11.
- A06030102_oir (Russian): Time-alignment on point. We code up to 00:27:00.
- J09050117_oir (Russian): Time-alignment displaced. We code up to 00:19:43.

At the end, please upload all the .eaf-files to the folder eaf_files_annotated adding your initials to the file name (e.g. CLLDCh1R04S01_oir_lf). THANK YOU :-)

File: ACQDIV repair coding scheme v04_NA

This is the original coding scheme provided by Prof. Dr. Mark Dingemanse in its entirety.

AQCDIV Repair Coding Scheme

Definitions: other-initiated repair and the three basic types of formats¹

Other-initiated repair. A sequence in which a repair initiation in turn T0 signals some trouble in a prior turn T-1 and is treated as making relevant the provision or ratification of a repair solution in a next turn T+1. T0 and T+1 together form a side sequence that temporarily halts the conversation.

1. *Open request.* An expression that requests clarification of a prior turn, leaving open where or what the problem is. Often an interjection or 'What?' -like form; typically results in repetition.
2. *Restricted request.* An expression that requests specification or clarification, restricted to a specific element of the trouble source. Often includes WH-question word and/or repetition.
3. *Restricted offer.* A polar question that offers a candidate understanding and invites confirmation or correction in the next turn. Can include repetition and/or new material.

Coding conventions

We code candidate repair sequences by considering (i) how the repair initiation is formatted and (ii) how it relates to the prior turn. Repair solutions can also be informative. There are 4 possible codes:

- 0** Not clearly a repair sequence
- 1** Open request
- 2** Restricted request
- 3** Restricted offer

Due to the way candidate cases are identified, a large proportion will be **0** — not clearly a repair sequence. Typical examples are cases where B's question is a request for information or a start of something new. Here are three things that may look like repair but aren't:

1. Incredulous news receipts like "Really?" do not indicate a trouble in understanding, but are a conventionalized way of showing surprise, and they are *not repair*.
2. Tell-me-more questions respond to T-1 (e.g. 'When did that happen?'), but do *not* halt the conversation to signal and solve a trouble in understanding, so they are *not repair*.
3. Broad questions like "Why?" and "What's the matter?" do not indicate a trouble in understanding the prior turn as such, so they are *not repair*.

Of repair sequences, the great majority should be easily codable as **1-3**. Pilot coding shows more complex or ambiguous cases to be rare; for those we use **0**. Further coding uses these rules of thumb:

1. Code conservatively using the *conference talk principle*: only code as 1, 2 or 3 if you are happy to use the case as an example in a conference talk. Err on the side of caution.
2. "What?" and equivalents are often Type 1, but watch out for referential underspecification (e.g. "it" in T-1); in such cases it is more likely to be Type 2 (i.e., what thing).
3. Composite formats like "Huh Peter?" should be coded as whatever their last element is, i.e. Type 2 in this case.

¹ Based on: Dingemanse M, Enfield NJ. Other-initiated repair across languages: towards a typology of conversational structures. *Open Linguistics*. 2015;1: 98–118. doi:10.2478/opli-2014-0007; Dingemanse M, Roberts SG, Baranova J, Blythe J, Drew P, Floyd S, et al. Universal Principles in the Repair of Communication Problems. *PLOS ONE*. 2015;10: e0136100. doi:10.1371/journal.pone.0136100; Dingemanse M, Kendrick KH, Enfield NJ. A coding scheme for other-initiated repair across languages. *Open Linguistics*. 2016;2: 35–46. doi:10.1515/opli-2016-0002

Other-Initiated Repair in Children's Language Acquisition

v03

0 not repair

here <i>let me take some rice, okay?</i> okay.	T0 does not appear to signal any trouble in T-1, but instead issues a request which is granted by A in T+1. No evidence of trouble, and T+1 doesn't redo or clarify T-1.
where's the daddy? <i>where?</i> the daddy is gone to the market	A asks a question in T-1 and answers it in T+1. The question at T0 appears to repeat part of T-1 but does not pick out part of it as problematic; nor is it treated as such by A in T+1.
hammer <i>and a hammer is for what?</i> for nails	T0 asks for additional information about T-1, but does not indicate a trouble in hearing or understanding.
huh? <i>you're done taking a bath right?</i> eat, eat.	These turns do not appear to form a coherent sequence. It is not possible to see T0 as initiating repair on T-1, or T+1 as providing a repair solution.
xx drink <i>look, what does he drink?</i> milk	While T0 seems to pick out something in T-1 and is answered in T+1, the "look"-preface of T0 suggests it is a new Q&A sequence and not repair. Seeing more context might help, but based on this info it is not clearly repair.

1 open request

is it good? <i>huh?</i> is it good?	Canonical case: T0 is a simple huh-like interjection requesting repetition or clarification; T+1 repeats T-1.
it's called red <i>huh?</i> red.	T+1 doesn't need to be a full repetition of T-1: it may keep only part of the trouble source turn.
a thunder <i>what?</i> it's going to rain	T0 need not be 'huh?', can also be 'what' as long as it indicates trouble without specifying what or where it is. Response in T+1 not always simply repetition, can also clarify or modify T-1.

2 restricted request

hey, she's running <i>who?</i> Jane.	Canonical case: T0 is or includes a wh-question word restricting the problem to a reference in T-1; T+1 repeats and/or clarifies.
it's in his bag. <i>in which bag?</i> in that one.	T0 can also be composed of wh-question + repetition; Again, T+1 repeats just the information that is asked for, not the whole original turn.
so he didn't want to come? <i>huh, Peter?</i> yeah	The format in T0 combines type 1 and type 2, but its final element is type 2, which is also how it is treated. Therefore it is coded as type 2.

3 restricted offer

oh, that's uncle Uri's <i>this one?</i> yeah.	Canonical case: T0 offers a candidate repair solution by means of a polar question. T+1 confirms this suggestion with a simple "yeah".
xxx dirty <i>is it dirty or not?</i> it's dirty.	Response in T+1 not always simply "yes", can also confirm by repeating the key part of T0/T-1.
no, she's going out <i>she's going out?</i> she's having a train ride	Response in T+1 not always simply "yes"; can also be implicit confirmation with clarification.

Other-Initiated Repair in Children's Language Acquisition

v03

Examples of repair sequences in 7 languages (from Dingemanse et al. 2015)

Language	1. open request	2. restricted request	3. restricted offer
Cha'palaa (Floyd)	<i>demanperee yumaa</i> Turn {it} off now mm mm? <i>cocina demanperee</i> Turn the stove off.	<i>apao, aamama'junu kaa chipijcha</i> <i>yumaa llundetsunkai</i> father, there by grandma the madroñas are getting ripe rukaa where? <i>enu aamama'junu ((pointing))</i> here by grandma	weemujtusha, santsa mar- santa in other places, in Santa Maria they say they are buying them at a dollar and a half outee baskets? jee yes
Italian (Rossi)	<i>la (fa-) scade domam vera</i> it (fa-) it expires tomorrow right? ah huh? <i>la scade domam (vera)</i> it expires tomorrow (right)?	<i>non ho ancora iniziato ad usarla</i> I haven't yet started using it cosa what <i>la calcolatrice scientifica</i> the scientific calculator	<i>con un po' di olio è più buona se</i> vuo with a bit of oil it's better if you like olio oil? mh mh
Lao (Enfield)	<i>qaw3 vaj/4 qaw3 vaj/4</i> put {them} away, put {them} away haa2 huh? <i>qaw3 vaj/4</i> put {them} away	<i>bóö1 mii2 sùak4 vaa3</i> Don't you have any rope? sùak4 fiang3 Rope {for} what? <i>sùak4 mat1 ñuung2</i> Rope for tying up mosquitoes.	<i>bòö1 huu4 cak2 mong4 man2</i> {We} didn't know where it was. daan3 nguu2 Daan Ngou? gee5 Yeah.
Mandarin (Kendrick)	<i>nǐ yōu gōngkè ma</i> do you have homework? hmm hmm? <i>jīn tiān yōu méi yōu gōngkè</i> do you have homework today?	<i>nǐ zhīdào liérén ma</i> do you know hunter? shéme liérén what hunter? <i>mànhuà a</i> the cartoon	<i>jiù dā ge jíchéngchē, bā shí ma</i> then I took a taxi, eighty dollars <i>nǐ shì shuò cóng gōngguǎn jiéyùn</i> zhàn guò lái you're saying you came from Gongguan subway station? <i>bù shì wǒ cóng kējì dálóu</i> no, I came from the Technology Building
Russian (Baranova)	<i>Ej skol'ka let ta?</i> How old is she? a? huh? <i>Ej skol'ka let ta eta?/-</i> How old is she, this one?	<i>Vaz'mite zafra ejo</i> Take her tomorrow kavo who? <i>Ta.niu</i> Tanya.	<i>U ix doch eh vyshla zamuzh, radila.</i> <i>i vot nada, payedut tuda</i> Their daughter um got married, had a child and now they need, they will go there. v Azorsk? to Ozorsk? v Aziorsk. to Oziorsk.
Siwu (Dingemanse)	<i>ጀ sí ጋ de ጀ sate si ጋ kpi</i> she should be responsible if he dies rn? rn? <i>ጀ ፊ sí ጋ de ጀ sate</i> that she should be responsible	<i>Mékèli ጋ</i> It's Michael's. ጀna mékèli: Which Michael? <i>oò, ተ ሽይ- ተ ሽይ ጋbi Mékèli.</i> oh, your father- your father's son Michael.	<i>ጀra iwē ጋkuti iyoo?</i> is there still some in the house? ጀb nota: purified water? <i>ጀ.</i> yeah.
Yéli Drye (Levinson)	<i>daa wa ma ngmē</i> will they eat it? aa? huh? <i>daa wa ma ngmē</i> will they eat it?	<i>mu tpile daa wa ma ngmē, apii</i> they cannot eat that thing right? ጀ tpile? what thing? <i>mu tpile taataa</i> that red thing	<i>ngm:aa kn:ää, mgémí ndapi.</i> the replacement big kê shell and the marriage shells mgémíndapi? marriage shells? <i>nyää</i> yes

3

File: notes_types

Notes

The files are already cut.

Generally: for the types we only add codes to the T0s.

T-1 is relevant for the classification though.

T+1 is not empirically relevant (it does not determine the type of repair, but it is influenced by it), but in some cases it is relevant for us as coders (thus it may be consulted to decide on the type – see below).

Only the last element of an utterance matters to determine the type (see Dingemanse 2015). E.g. "huh? that's a giraffe?" is type 3 (restricted offer), even though it is preceded by a type 1 (huh – open request).

in some rare cases, the utterances contain a = to split the utterance into two elements. in this case, we should also make sure to consider the element AFTER the = to determine the type of repair.

Type 1: in some Chintang files, huh is translated with yes?

Type 1 vs type 2 with 'what?': if it cannot be determined by the T-1, T+1 or the content of the following, then i dont code it

e.g. in "mom, this!" – "what?" – "this"

Type 3: Make sure to look at the utterance in the original language to detect repetitions (as candidate understandings).

Careful: sometimes question words are actually a repetition. E.g. where?

- one could easily think it's a restricted request (type 2). However, if the previous utterance is "where is the giraffe?", it is a repetition, thus type 3 (candidate understanding).

0: as an extra loop to exclude the cases that are not actually repair. E.g. questions like 'why', which cannot be allocated to any of the types. you could technically also suggest a new type.

B.2 Detailed reliabilities and agreements

I calculated all the reliabilities and agreements in R (R Core Team, 2021), using the kappa2()- and the agree()- functions, respectively, of the irr-package (Gamer et al., 2019). For the sequences, I calculated the reliabilities and agreements for the T0s. Source code B.1 shows the output of the reliability test of the definitive inter-annotator assessment, as well as the reliability of training round 2 (see Chapter 3).

```
1 # Reliability for definitive inter-annotator assessment  
2  
3 kappa2 (reliability Def)
```

Table B.1: Agreement and reliability for each individual file, expressed in percent. na = not available due to missing cases in the file.

File	Language	Agreement	Reliability
A0630102	Russian	98.9	78
J09050117		98.5	69.2
CLLDCh1R04S01	Chintang	97.8	56.6
CLLDCh12R01S01a		98.8	31.4
CLLDCh104S02		100	na
MIC-2000-12-11	Indonesian	95.9	64.7
MIC-2000-12-16		97.9	63.7
RIS-2000-03-04		98.1	60.6
Overall	all	98.4	63

```

4
5 Cohen's Kappa for 2 Raters (Weights: unweighted)
6
7 Subjects = 6715
8 Raters = 2
9 Kappa = 0.63
10 z = 51.6
11 p-value = 0
12
13 #Reliability for training round 2
14
15 kappa2(training2)
16
17 Cohen's Kappa for 2 Raters (Weights: unweighted)
18
19 Subjects = 5677
20 Raters = 2
21 Kappa = 0.607
22
23 z = 46.1
24 p-value = 0

```

Source Code B.1: Annotation reliability of the T0 turns.

The agreement was calculated with tolerance=0. A detailed overview of the agreement and reliability for each file of the definitive assessment round is shown in Table B.1.

Another informative measure for interpreting the reliability and agreement measure appropriately is to count how many cases each of the annotators annotated (if the annotator who then continues with the annotation has initially annotated fewer cases, this is an indication that the subsequent annotation was likely rather under-confident as opposed to over-confident).

Table B.2: Total cases of T0 annotated per file, grouped by annotator, expressed in raw numbers.

Amount of T0 codes between raters	language	LF	NA
A0630102	Russian	32	24
J09050117		33	27
CLLDCh1R04S01	Chintang	29	23
CLLDCh12R01S01a		13	12
CLLDCh104S02		0	0
MIC-2000-12-11	Indonesian	3	6
MIC-2000-12-16		14	20
RIS-2000-03-04		33	32
Overall	all	158	144

This measure was kindly suggested to me by my supervisor. An overview of the number of annotated cases of T0s is thus provided in Table B.2.

Because the ACQDIV database is an aggregate corpus which was made cross-operable post hoc, a part of the differences among the languages might be attributable to slight differences in the characteristics of the individual subcorpora.

The type reliability is shown in Source code B.2. Here, I did not calculate the agreement due to the high reliability. The latter is a more strict measure considering that it takes into account annotation by chance, and penalizes unevenly distributed categories (here, the uneven distribution was given by the category 0 = none, which occurred very rarely).

```

1 Cohen's Kappa for 2 Raters (Weights: unweighted)
2
3 Subjects = 275
4 Raters = 2
5 Kappa = 0.817
6
7 z = 19.5
8 p-value = 0

```

Source Code B.2: Annotation reliability of the initiation types.