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L2 fluency in spoken interaction: a case study on the use of other-repetitions and collaborative completions

Second language (L2) speech fluency has usually been studied from an individual's perspective with monologue speech samples, whereas fluency studies examining dialogue data, especially with focus on collaborative practices, have been rare. In the present study, the aim was to examine how participants maintain fluency collaboratively. Four Finnish upper secondary school students of English completed a problem-solving task in pairs, and their spoken interactions were analyzed qualitatively with focus on collaborative completions and other-repetitions. The findings demonstrated that collaborative completions and other-repetitions contribute to interactional fluency by creating cohesion to the interaction. Collaborative completions were also used to help the interlocutor to overcome temporary (individual) disfluent phases. Overall, the findings suggest that individual and interactional fluency are intertwined in spoken interaction, which should be acknowledged in theoretical approaches to L2 fluency and in empirical studies examining L2 fluency in interactional contexts.

Keywords: L2 speech fluency, interaction, language learning, oral proficiency

Asiasanat: vieraan kielen puheen sujuvuus, interaktio, kielen oppiminen, suullinen kielitaito

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1 Introduction

Spoken interactions are fundamentally collaborative: each participant contributes to maintaining the flow of speech and to minimizing silences (see e.g. Clark 1996). Participants link and adapt their utterances to previous turns, demonstrating "[t]he ability to vary one's lexis while still saying more or less the same thing" (McCarthy 1998: 115) and in this way create cohesion to the interaction (see also Tannen 1989: 50–51). However, creating links across turns can be particularly challenging in second language (L2) interactions, since resources must also be allocated to turn-internal aspects, including grammatical, lexical and phonological processing, which are not as automatized as in first language (L1) speech production (see Dörnyei & Kormos 1998: 354–355; Kormos 2006). Since the participants have to attend to both higher, interactional level (between-turn) and lower level (within-turn) aspects during interaction, the differences in their skills in maintaining fluency may be reflected in *individual fluency* (how fluently they produce speech during their own turns) as well as *interactional fluency* (how fluently their discussion proceeds across turns) (see also Lauranto 2005). The present study examines the interplay between these two phenomena by focusing on the following question: how do learners keep the flow of talk going collaboratively in spoken interaction?

While L2 speech fluency in monologue settings has been widely studied (recently, e.g., by Götz 2013; Kahng 2014; Peltonen & Lintunen 2016), the concept of L2 fluency has rarely been applied to interactional contexts (for recent exceptions, see Witton-Davies 2014; Tavakoli 2016). Both in L2 speech fluency research and the mainstream second language acquisition (SLA) research tradition more generally, L2 competence has traditionally been approached from an individual's perspective (for criticism of the individualistic approach in SLA, see e.g., Firth & Wagner 1997). Similarly, when L2 speech fluency has been examined in dialogue, the focus has often been on analyzing an individual's performance, while less attention has been paid to the interaction between the participants (but see Riggenbach 1991; Hüttner 2009). However, for capturing fluency in an interactional context, it is necessary to extend the analysis from individual contributions to phenomena that relate to the collaborative construction of fluency. The present, exploratory case study approaches this underresearched area by focusing on two interactional practices, *other-repetitions* (words or longer stretches of interlocutor's speech repeated without modification) and *collaborative completions* (contributions filling in an utterance that the previous speaker has started). The practices are examined as indicators of interactional L2 fluency. With a detailed qualitative analysis, the study shows how other-repetitions and collaborative completions can be used as a basis for examining fluency in interactional data and highlights the importance of incor-

porating collaborative aspects to conceptualizations of L2 fluency.

This article starts with a discussion on the approaches to fluency in interactional settings in section 2. In section 3, the methodology for the study is presented, including information about the participants (section 3.1) and data collection and analysis (section 3.2). The present study focuses on four upper secondary school students of English performing a problem-solving task in pairs. The findings of the qualitative analysis are presented in section 4: section 4.1 focuses on the use of other-repetitions and section 4.2 on collaborative completions. While the analysis focuses on how the participants maintain interactional fluency collaboratively, connections between individual and interactional fluency are also examined. The findings are discussed in section 5. In the discussion, particular attention is paid to the implications of the findings for L2 fluency research.

2 Approaches to interactional L2 fluency

Fluency is generally regarded as one aspect of (oral) L2 proficiency (on the Complexity-Accuracy-Fluency-framework, see e.g., Housen et al. 2012). The degree of smoothness and effortlessness in L2 speech (e.g. Chambers 1997) is commonly studied by quantifying fluency-related phenomena, such as pauses and other hesitations, that can be grouped into three main dimensions of fluency: speed (e.g., speech rate), pausing (the frequency, duration and location of pauses), and repair (false starts, repetitions, and reformulations; Skehan 2003, 2009, 2014; Tavakoli & Skehan 2005). As the measures are applied to L2 speech, the implicit point of comparison is maximally fluent native speech without pauses or other disfluencies. However, this idealized view has been criticized by several researchers (e.g., Fillmore 1979; Lennon 1990) and challenged in empirical studies; studies that have included a native speaker control group have demonstrated that also native speakers vary in their fluency (e.g., Götz 2013; Kahng 2014; Peltonen & Lintunen 2016).

As stated in the introduction, fluency has usually been examined from the individual's perspective with monologue speech samples. The focus on an individual's fluency is also often reflected in definitions of fluency: a case in point is Lennon's (2000: 26) oft-cited description of fluency as "the rapid, smooth, accurate, lucid, and efficient translation of thought or communicative intention into language under the temporal constraints of on-line processing". Viewing efficient processing as the basis for fluent speech, the definition is in line with the view of *utterance fluency*, i.e. measurable features in speech samples, reflecting an individual's underlying *cognitive fluency* (the efficiency and ease in processing; Segalowitz 2010).

To complement the view of fluency as an individual's ability with a so-

cial perspective, researchers have recently suggested that a social dimension should be incorporated to L2 fluency analysis (e.g., Segalowitz 2016; Wright & Tavakoli 2016), in line with calls to approach L2 learning and competence, as well as language use more broadly, from both social and cognitive perspectives (e.g., Clark 1996; Douglas Fir Group 2016). However, so far descriptions of L2 speech fluency have usually not included the social aspect (but see Lauranto 2005; Kirk & Carter 2010), and few studies have examined collaborative fluency in interactional contexts. A notable exception is Riggenbach's (1991) pioneering study on L2 fluency in an interactional setting, which included an examination of collaborative completions and *echoes* (other-repetitions), among other interactional phenomena, as potential "conversational fluency" indicators. More recently, Witton-Davies (2014) and Tavakoli (2016) compared L2 utterance fluency in monologue and dialogue settings; however, as the starting point in these studies was to apply monologue measures to dialogue data, the individual's perspective is more prominent than the collaborative aspects. Extending fluency analysis from monologue to dialogue contexts is the important first step in exploring interactional fluency, but more studies specifically on learners' joint efforts to maintain fluency are needed to achieve a comprehensive picture of fluency in interactional settings.

Despite the lack of studies focusing on interactional fluency within the field of L2 speech fluency research, the co-construction of interactional flow has been examined from other perspectives. For instance, CA-SLA/CA-for-SLA researchers applying conversation analysis to L2 data have examined learners' interactional practices as indicators of *interactional competence* (IC; for overviews, see e.g., Hall & Pekarek Doehler 2011; Kasper & Wagner 2011). Interactional practices related to creating cohesion in turn-taking and avoiding long pauses (*turn-taking management*, see e.g., He & Young 1998; Galaczi 2014) can also be considered as essential aspects of interactional fluency. For instance, Peltonen (2017) explored L2 fluency in an interactional setting and found that one of the main features distinguishing learner groups from different school levels (9th grade and upper secondary school) was the duration and frequency of between-turn pauses in addition to measures of individual fluency. Similarly, studies in the field of language testing have shown that fast-paced turn-taking, including overlaps and latches, along with mutual topic development and smoothness in topic transitions, characterize learners' IC at the highest proficiency levels (e.g., Galaczi 2014). Contributing to the co-construction of interaction, the two interactional practices examined in the present study have also been analyzed from the perspectives of *alignment* and *accommodation*, since both other-repetitions and collaborative completions can be treated as indicators of speakers acknowledging previous turns and adapting their contributions accordingly (e.g., Pickering & Garrod 2004; Cogo & Dewey 2006: 66–73; Dings 2014).

The essential aspect in the approaches presented above is the view of interaction as co-constructed (see e.g., Jacoby & Ochs 1995; He & Young 1998). As time is a shared resource in dialogue (affecting e.g., interactional rhythm; Auer et al. 1999), avoiding long pauses and maintaining the progressivity of talk are shared responsibilities for the participants (see also Clark 1996; on the universal tendency to minimize silences between turns, see Stivers et al. 2009). From the perspective of fluency, the collaborative nature of spoken interaction is captured particularly well in McCarthy's (2010: 7) concept *confluence*, which refers to the joint production of flow in a dialogue setting: in cohesive interaction, the participants maintain fluency not only within their own turns but also across turn boundaries. The notion of confluence (or interactional fluency) thus expands the perspective from an individual speaker's fluency to the interaction as a whole. Also Hüttner's (2009) examination of raters' perceptions of fluency in English as a lingua franca (ELF) interactions revealed that raters orient to the co-constructed nature of fluency. Therefore, while individual and interactional fluency are approached theoretically as related but separate notions in the present study (see also Sato 2014: 88; Tavakoli 2016: 147–148), in practice the two aspects are likely to interact and overlap.

The first interactional practice examined in the present study, *other-repetition*, refers to words or longer stretches of interlocutor's speech that are repeated without modification (cf. self-repetition, where the speaker's own speech is repeated). In the context of ELF interaction, other-repetitions have also been referred to as *Represents* (House 2002: 254), highlighting the fact that "re-presenting" the interlocutor's words helps in coping with processing time pressure (see also Hüttner 2009). In other words, from the perspective of fluency, other-repetitions can contribute to individual fluency by providing more planning time for the speaker; repeating words from the interlocutor's output does not require much attentional resources and thus processing resources can be allocated to planning the rest of the utterance (Dörnyei & Kormos 1998: 368–371; see also Tannen 1989: 48–49; Pickering & Garrod 2004: 181). In addition to facilitating processing, other-repetitions can demonstrate attentiveness to and agreement with the interlocutor's contribution (e.g., Cogo & Dewey 2006: 66–73)[1]. Finally, since other-repetitions link the speakers' contributions to the preceding turn(s), they function as devices for creating cohesion to the interaction (Tannen 1989: 50–51) and therefore also enhance interactional fluency.

Similarly, *collaborative completions*, also referred to as *anticipatory completions* (Lerner 1996) or *pre-emptive completions* (Lerner 2004), contribute to

[1] (Other-)repetitions can also have various other functions in interaction. For instance, CA and CA-SLA studies examining repair (in a fairly broad sense, referring to practices for addressing various problems in interaction; Schegloff et al. 1977) have focused on the repair-initiating functions of repetitions (e.g., Kurhila 2006; Lilja 2010; Kurhila & Lilja 2017).

interactional fluency, cohesion and the co-construction of interaction. Collaborative completions fill in an utterance that the previous speaker has started (e.g., Dings 2014). While collaborative completions have been studied in different L1s, including conversations in English (e.g., Lerner 1991, 1996, 2004; Rühlemann 2007), Finnish (Helasvuo 2004), Japanese (e.g., Ono & Yoshida 1996; Hayashi 2014) and Korean (Kim 2002), fewer studies have been conducted on collaborative completions in L2 interactions (but see Dings 2014; Taguchi 2014). From the perspective of the present study, the central functions of collaborative completions identified in previous studies (e.g., Hayashi 2014; Taguchi 2014) include achieving a shared perspective with the interlocutor by demonstrating agreement with their viewpoint and, commonly found especially in L2 interactions, solving communication problems for instance in conjunction with word searches[2].

While many opportunities for turn completion are created with certain two-part syntactic constructions (e.g. the "if X – then y"-construction, forming a *compound turn-constructional unit*; Lerner 1991), for the present study, unprojected opportunities for completion are more central: they occur in interaction due to "occasional halting of a turn's progressivity" (Lerner 1996: 257), including laughter, within-turn pauses, word searches, word-cut-offs, repetitions, and non-verbal behavior (Lerner 1996: 256–267). For instance, the opportunity for completion arising from a within-turn pause is demonstrated in Lerner's (1996: 260) example, where the first speaker produces the beginning of the turn ("Did they do that old trick with the basketball where they putta") and the second speaker completes it after a brief 0.4 second pause ("string around it"). In addition to examining mid-turn pauses, identifying instances of word searches is particularly relevant for the present study, as collaborative completions have often been found to occur in conjunction with word searches in L2 data (Taguchi 2014). Typically, completions related to word searches are short and only include the expression that is being searched for (Lerner 1996: 261). Furthermore, word searches often occur near the end of the turn unit (*terminal item completions*; Lerner 1996: 256, 262). In terminal item completions, the final word(s) in a turn can be produced by the interlocutor, or they can be co-produced with the current speaker (Lerner 1996: 256).

To summarize, the study examines L2 speech fluency in an interactional setting. Two main senses of fluency can be distinguished: *individual fluency* refers to maintaining the flow of speech within one's own turn, while *interactional fluency* refers to collaboration in maintaining flow across turn boundaries (cf. McCarthy's 2010 confluence and the discussion above). The study addresses the following research question: How do collaborative completions and other-repetitions contribute to maintaining fluency in L2 interaction?

[2] Word searches (and collaborative completions) have also been examined within the broader framework of repair organization in CA-SLA studies (see e.g., Kurhila 2006).

Both other-repetitions and collaborative completions involve acknowledgement of the interlocutor's contributions and are therefore regarded primarily as potential indicators of interactional fluency.

3 Methodology

3.1 Participants

The participants in the present study were four 17-year-old, Finnish-speaking second year upper secondary school students of English (pairs: Eero and Timo, both male; Kati and Anni, both female). The participants' names have been replaced with pseudonyms to secure their anonymity. The students took part in a larger research project examining L2 speech fluency from different perspectives (see Peltonen 2017) and were chosen for the present study since they were among the pairs that produced the most collaborative completions and other-repetitions. The participants had studied English for approximately eight years; the results from a vocabulary test aimed at estimating their overall proficiency in English (LexTALE, see Lemhöfer & Broersma 2012) suggest that Kati (score 75.00%), Eero (score 72.50%) and Anni (score 63.75%) represent level B2 (scores between 60% and 80%) in the Common European Framework of Reference (Council of Europe 2001), while Timo (score 97.50%) represents level C1–C2 (scores between 80% and 100%; see Lemhöfer & Broersma 2012: 341).

3.2 Data collection and analysis

The participants completed a communicative problem-solving task in pairs. The participants were given pictures of sixteen items and asked to discuss them in English and to rank them in the order of their potential usefulness for survival on a desert island (after Klippel 1984: 63–64 and Ur 1990: 70–72). The task was piloted for suitability with a learner group that did not participate in the actual study. The participants completed the task one pair at a time in a quiet space during regular school days. Before the task, the participants were given a maximum of two minutes of individual preparation time. After the preparation, the pairs were given six minutes to complete the task together. The researcher was present in the room only to record the dialogue and did not participate in the interaction.

In contrast to the mostly quantitative fluency studies, the approach employed in the present study was qualitative. The approach was influenced by the qualitative components included in previous mixed methods L2 (monologue) fluency studies (e.g., Ejzenberg 2000; Hilton 2008; Peltonen & Lintunen 2016), as well as conversation analysis. After all instances of collabo-

rative completions and other-repetitions had been identified from the dialogue transcriptions (for transcription conventions, see Appendix), the functions and contexts of these two interactional practices were analyzed in detail. More specifically, for collaborative completions, the following aspects were coded: the type of completion (unprojected or forming a compound turn-constructional unit), the extent of completion (a single word or phrase or a longer contribution) and the location of completion (terminal item completion or other). The interplay between interactional and individual fluency was also examined. The data were analyzed twice by the researcher with a 5-month gap between the rounds to increase the reliability of the analysis.

During their relatively short but fast-paced discussion that lasted for approximately three minutes (173.79 seconds), Timo and Eero produced 674 syllables (Eero 59% of them). Their discussion included 14 instances of other-repetition (Eero 4, Timo 10) and three collaborative completions (Eero 1, Timo 2). Kati and Anni's discussion lasted for approximately seven minutes (414.26 seconds). During the discussion, Kati and Anni produced 995 syllables (Kati 61% of them). Their discussion contained four other-repetitions (Kati 3, Anni 1) and five collaborative completions (Kati 4, Anni 1). In the following, the findings for the use of other-repetitions and collaborative completions will be discussed in sections 4.1 and 4.2, respectively.

4 Findings

4.1 Other-repetitions

Example 1 illustrates a typical pattern in the use of other-repetitions: other-repetition followed by elaboration (being applicable approximately to 2/3 of other-repetitions in the data).

(1) Other-repetition with elaboration

```
66 →        E:    ää (.) maybe (0.39) the knife (0.28)
67              [we can-]
68 →        T:    [knife ] yeah knife so you can (.)
69          E:    [ah]
70          T:    [gut] the fish [so]
71          E:                   [ y]es (0.27) or +hunt+
72              (0.27)
73 →        T:    hunt [yeah]
74          E:         [wah-]
75              (0.64)
76          E:    [but-]
77          T:    [°or°] (.) kill boars [with it *heh*]
78          E:                          [*ahahahah*   ] yes
```

In Example 1, Timo's other-repetition of *knife* in line 68 indicates acknowledgement of Eero's contribution and shows agreement with it (note also the following agreement token *yeah*), as well as creates cohesion to the interaction. From the perspective of individual fluency, the other-repetition also helps in coping with processing time pressure: picking the word from Eero's output frees resources for planning the rest of the turn. Timo's subsequent self-repetition of the word *knife* provides him additional planning time. In the rest of the turn (lines 68 and 70), Timo provides a reason why the knife is a good choice (*so you can gut the fish*) and in this way contributes to the progression of the discussion. Typically, the elaborations following other-repetitions contain justifications for the chosen items.

After Timo's elaboration, Eero continues in line 71, acknowledging Timo's contribution (*yes*) and providing another reason for choosing the knife (*or hunt*), creating cohesion to the interaction by linking his turn to Timo's utterance. After Eero's contribution, Timo uses the "other-repetition + elaboration" -pattern again with a repetition of the word *hunt* in line 73, followed by a more specific example of hunting with the knife in line 77 (*kill boars with it*). The interaction proceeds cohesively; both participants contribute to interactional fluency by linking their own contributions to the previous speaker's turn with other-repetitions and elaborations.

Example 2 demonstrates the use of other-repetition in conjunction with a word search, which occurred five times in the data. In Example 2, in addition to demonstrating acknowledgement and creating cohesion, the other-repetition confirms the result of the word search as the correct target language item. In similar cases in the data, the target item was also occasionally provided by the interlocutor, which was then repeated by the first speaker (as in Example 5, section 4.2). Especially the latter instance is potentially beneficial from the perspective of language learning, since the interlocutor can provide interactional adjustments above the other participant's level (see the *negotiation for meaning* framework in SLA; e.g., Long 1996). The role of *scaffolding* (Wood et al. 1976) or assistance by more advanced participants in completing activities beyond one's own capabilities has also been central in sociocultural approaches to L2 learning.

(2) Other-repetition in conjunction with a word search

```
85 →        E:    and the- what is (.) that called +hammer+
86                (0.27)
87 →        T:    hammer yeah
88          E:    [so-]
89          T:    [so ] you can build stuff (.)
90          E:    ye[s    ]              [yes  ]
91          T:      [out of] the palms and [so on]
92                (0.46)
93          E:    and we can (0.35) ahm umm {*pt*_0.45}
```

```
 94            E:      set up the (.) camp an (.)
 95            T:      yeah
 96                    (0.36)
 97            E:      tent
```

Example 2 begins with Eero's word search in line 85, indicated by the wh-question *what is that called*. The question is, however, not directed at Timo: Eero gazes towards the paper (indicating engagement in a "solitary word search"; Goodwin & Goodwin 1986) and immediately provides the result of the word search (*hammer*) himself. Followed by a brief silent pause in line 86, Timo confirms the result of the word search with a repetition of the word *hammer* in line 87. Following the pattern discussed earlier, Timo continues his turn by providing a reason for choosing the hammer (lines 89 and 91). During Timo's turn, Eero indicates agreement with two backchannels in line 90. After Timo's elaboration, the discussion proceeds cohesively, as Eero builds on Timo's turn and continues with an alternative use for the hammer in lines 93–94 and 97 (*set up the camp and tent*). Due to this linking of turns, the discussion can be characterized as interactionally fluent.

4.2 Collaborative completions

None of the eight collaborative completions in the data occurred as parts of compound turn-constructional units (Lerner 1991, 1996); that is, they did not complete particular two-part syntactic structures that include a preliminary component and project a final component. In most cases, the completions were clearly of the "unprojected" type and occurred mid-clause, most commonly being preceded by silent pauses that provided the opportunity for turn entry for the interlocutor. In some cases, a shorter micropause (of less than 0.25 seconds in duration) occurred in combination with another cue (filled pause *uh*, FP, as in Example 5, or rising intonation). Overall, half of the completions produced by the participants were terminal item completions: that is, they occurred towards the end of the turn. The majority of the completions were also relatively short, usually consisting of a single word (Example 5) or a single phrase (Examples 3 and 4).

Example 3 illustrates a collaborative completion occurring in conjunction with a word search.

(3) Collaborative completion in conjunction with word search 1

```
 98            A:      okay (.) a::nd (.) then would be: {*pt*_2.76}
 99            K:      mm
100                    (2.70)
101            K:                  * RAISES GAZE FROM PAPER, LOOKS AT A
102            K:      [oh the-  ]
103 →          A:      [maybe the]n the uh fishing- (0.26)
```

```
104            A:              * RAISES GAZE FROM PAPER, LOOKS AT K
105            A:              * RIGHT HAND MOVES FROM CENTER TO RIGHT
106 →          K:      yeah (.) [fishing] gear[s ]
107            A:               [˚thing˚]     [ye]ah
108            K:      and maybe the: (.) emergency (0.62)
109            K:      um (0.38) r- uh $ro[cket$ *hah*]
110            A:                        [*hahaha*   ]
```

Typically for a word search completion, Kati's collaborative completion in line 106 is relatively short (a single noun phrase) and preceded by a hesitation cluster in line 103 that provides the unprojected opportunity for mid-clause turn entry. The cluster consists of a FP, followed by a cut-off word *fishing* and a brief silent pause, suggesting that Anni is engaged in a word search. In addition, Anni's non-verbal behavior in lines 104–5 indicates that she is not able to retrieve the word by herself: she raises her gaze towards Kati during the word search, which can be interpreted as a request for Kati to participate in it, supported also by Anni's simultaneous gesturing with her right hand (see also Goodwin & Goodwin 1986). At the same time when Kati offers her help and suggests a solution to the word search (*fishing gears*) in line 106, Anni completes the word search herself with an all-purpose word *thing* in line 107 (note that it is spoken softly, possibly signaling her awareness of it not being the correct target word). This results in slightly overlapping contributions (see also Example 4). Anni acknowledges Kati's suggestion immediately (*yeah*) in line 107, and Kati proceeds with the turn (as in Example 4) by suggesting another item. Thus, a potential problem is solved collaboratively and the flow of the discussion is maintained through mutual effort (see also Taguchi 2014).

Another example of a collaborative completion is illustrated in Example 4. Note that in this example, Kati's collaborative completion in line 26 overlaps with Anni's turn (cf. partially overlapping contributions in Example 3). While Eero and Timo did not produce overlapping completions, four of the five completions produced by Kati and Anni occurred partly or completely in overlap with the interlocutor's speech.

(4) Overlapping collaborative completion

```
19             A:      okay (.) the second would (0.46) be::: (0.41)
20                     mm: (2.78)
21                     I would say matches (0.45) because=
22             K:                                        =yeah
23                     (0.37)
24 →           A:      then we can (0.62)
25 →                   [light up a fi]re (.) [yeah]
26 →           K:      [make fire    ]   (.) [yeah]
27                     (0.45)
28             K:      if it's cold [then it]'s °ke-° getting warmer
29             A:                  [yeah   ]
```

In Example 4, Kati's collaborative completion (*make fire* in line 26) matches the content in Anni's turn (*light up a fire* in line 25), although the lexical choices differ slightly. The utterances are co-produced, and the overlap continues after the collaborative completion, when both acknowledge each other's contributions (*yeah*) at the same time in lines 25–26. Despite not uttering exactly the same words and the overlap lasting only for a short while, the co-ordination of their talk is reminiscent of so-called *choral co-production*, where contributions are produced at the same time and matched for e.g. lexis and tempo (Lerner 2002: 226).

The opportunity for turn entry in line 26 is created by the preceding silent pause in line 24[3]. However, compared to Example 3, it is not entirely clear whether the completion here relates to a word search. Similarly to typical word search completions, the "unprojected" opportunity for turn entry emerges mid-clause, and the completion is in itself short (a verb phrase). However, Kati does not yield the floor after the completion and continues with the turn herself in line 28, developing the idea of choosing matches further (*if it's cold then it's getting warmer*). Kati's completion, followed by the elaboration, ensures the smooth progression of the discussion and thus contributes to interactional fluency. Although the interaction between Anni and Kati was relatively well balanced (Kati produced 61% of the syllables during the interaction), overall Kati was the more active participant in taking responsibility of ensuring the progression of the discussion.

The final example of a collaborative completion is illustrated in Example 5. Here, as in Example 3, the completion is clearly related to a word search.

(5) Collaborative completion in conjunction with word search 2

```
154             T:      the sleeping bag might be (0.25)
155                     like (.) useless
156                     (0.43)
157             E:      yes but (0.44)
158                     it's nice if (.) [it's if  ] it's get- (0.41)
159             T:                       [it's nice]
160             E:      $if it gets$ really (.) u:h
161 →           T:      cold
162 →           E:      cold (.) [during] the nights ah (.)
163             T:               [yeah  ]
164             E:      you might need it
```

In Example 5, Timo provides a collaborative solution to Eero's word search with his completion (*cold*) in line 161 (notably during a silence, not overlapping with the interlocutor's speech as in Examples 3 and 4). Since *cold* is a high-frequency word, the word search is most likely due to a retrieval problem and

[3] As pointed out by an anonymous reviewer, Anni's turn also requires continuation from a grammatical perspective, as it only contains the finite part of the verb chain (on grammatical and interactional projection, see Auer 2005).

not due to a lexical gap. The completion can be regarded as a typical word search completion, since it is very short, only a single word, and occurs towards the end of the utterance (terminal item completion). Also characteristically for a word search completion, Timo yields the floor to Eero after the completion (cf. Examples 3 and 4). First, Eero accepts and acknowledges Timo's completion by repeating it in line 162 and then continues with the turn in lines 162 and 164.

A closer examination of the context preceding the completion reveals that Eero's turn (lines 157–160) is not entirely fluent (from the perspective of individual fluency): he stumbles over his words slightly (and most likely also notices this himself, indicated by the laughing voice in line 160), as indicated by the multiple false starts in line 158. The disfluencies occur already before the immediate context for turn entry in line 160, where a combination of a micropause and a FP (that in itself also contains a drawl, lengthening of the initial vowel) precede the completion. This "halting of a turn's progressivity" (Lerner 1996: 257) indicates a solitary word search (Eero's gaze directed away from Timo, not inviting his participation), but at the same time provides the unprojected opportunity for Timo's turn entry. In contrast to the clearly noticeable silent pauses that often precede completions, Timo still appears attuned to these fairly subtle cues. At least two reasons for this can be postulated: first, Eero's struggles with formulating his turn (the false starts) foreshadow the possibility for completion even before the combination of a micropause and a FP in line 160. Second, the overall fast-paced turn-taking during the interaction (the average turn pause duration being only 0.44 seconds) reflects the participants' mutual orientation to overcoming even relatively unnoticeable "hitches" in turn progressivity and efficiently minimizing very short silences.

From the perspective of interactional and individual fluency, Example 5 illustrates particularly well how the orientation to keeping the flow of talk going does not only occur collaboratively across turns (interactional fluency) or individually within the speaker's own turns (individual fluency), but can also reach to the other speaker's turn. In other words, minimizing pauses and maintaining fluency within the turns, which is perhaps more commonly thought of as being an individual speaker's responsibility (at least from an L2 fluency perspective), can also be accomplished collaboratively with the help of the interlocutor. Timo's collaborative completion could thus be characterized as him helping Eero to get over a temporary, local disfluency, while simultaneously maintaining interactional fluency.

5 Discussion and conclusion

This study examined the role of other-repetitions and collaborative completions in maintaining fluency in L2 interaction. The analysis of other-repetitions demonstrated that their main functions were to acknowledge and confirm the interlocutor's contribution and to create cohesion to the interaction (see also Tannen 1989; Cogo & Dewey 2006). The other-repetitions were often followed by elaborations, which further contributed to the smooth progression of the discussion and therefore also to interactional fluency. In addition to contributing to interactional fluency by linking utterances across turn boundaries, other-repetitions also helped to maintain individual fluency during the speaker's own turn. The speaker can use other-repetitions to cope with processing time pressure, since picking words from the interlocutor's output frees processing resources and provides more planning time (e.g., Tannen 1989: 48–49; Dörnyei & Kormos 1998: 368–371; on individual fluency resources, see also Peltonen 2017). To summarize, other-repetitions simultaneously contribute to both individual and interactional fluency (see also Figure 1).

Collaborative completions were also found to contribute to the flow of the interaction by creating cohesion to the talk across individual contributions (see also Rühlemann 2007: 101). In line with other studies on L1 (Rühlemann 2007: 101–102; Hayashi 2014) and L2 collaborative completions (Riggenbach 1991: 437; Dings 2014: 752; Taguchi 2014), they were found to be important in demonstrating a shared perspective with the interlocutor, as well as showing agreement with and acknowledgement of the interlocutor's contribution. Furthermore, similarly to Taguchi's (2014) findings, some of the collaborative completions in the present study occurred in conjunction with word searches and were used to solve potential communication problems collaboratively.

However, the present study also showed how collaborative completions functioned as devices for maintaining fluency, which has not been highlighted in previous studies. While fluency in an interactional setting was theoretically approached from the perspectives of individual within-turn fluency and interactional between-turns fluency (see also Figure 1), the analysis of collaborative completions showed that this distinction was not clear-cut. Example 5 was particularly illustrative: Timo's one-word contribution in the middle of Eero's turn helped Eero to cope with his (individual) within-turn disfluency. The example demonstrated that in addition to minimizing gaps collaboratively between turns and individually within turns, the participants engaged in within-turn collaboration to maintain fluency (cf. Lerner 1996: 267). Figure 1 illustrates how the element of "collaborative within-turn fluency" relates to individual and interactional fluency. These findings highlight the importance of acknowledging the intertwined nature of individual and interactional fluency both in theoretical and empirical approaches to fluency in interactional settings.

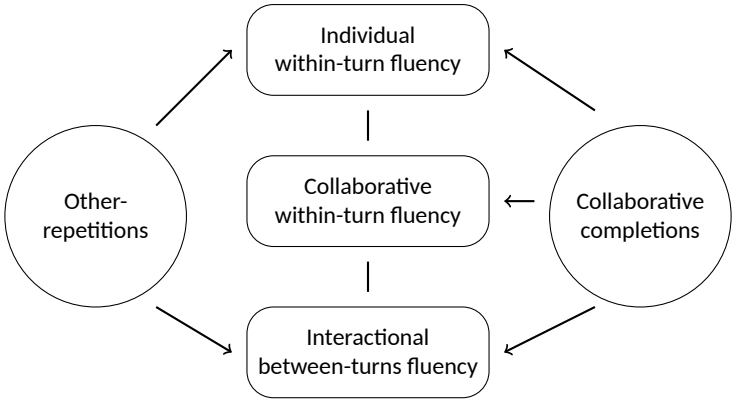

FIGURE 1. Resources for maintaining L2 fluency in interaction.

Methodologically, the present study demonstrated the usefulness of examining other-repetitions and collaborative completions as indicators of fluency in an interactional context. For multifunctional phenomena, such as the two practices examined in the present study, a fine-grained qualitative analysis is particularly revealing. However, acknowledging the limitations to generalizability based on the findings of this small-scale, exploratory case study and the potential effects of the task instructions on the interaction, more studies on interactional fluency in different settings are needed to confirm the tendencies demonstrated here.

In addition to collaborative completions and other-repetitions, future research could also examine other potential resources for the co-construction of fluency, such as choral co-production (see Lerner 2002), different means for recycling vocabulary (e.g. *relexicalization*, or the use of near-synonyms in linking turns, McCarthy 1998: 112–116; see also Galaczi 2014 on topic development as an indicator of IC) and non-verbal behavior (including *embodied completions*, see e.g., Olsher 2004; Mori & Hayashi 2006). However, while broadening the scope of L2 fluency analysis to the collaboration between the participants provides a new viewpoint to L2 fluency, it also poses new challenges: to narrow the focus of interactional fluency analysis and to avoid interactional fluency becoming an all-encompassing term, it is important to explicate how interactional fluency relates to other, similar concepts (such as alignment or IC, cf. discussion in section 2). Therefore, in the future, more interdisciplinary dialogue among CA-SLA, language testing and L2 fluency researchers is needed.

Acknowledging the interconnected nature of individual and interactional fluency has also important implications for language teaching and language testing. In language testing contexts, in addition to assessing the individual's

competence, collaboration between the interlocutors should also be taken into account (see also Hüttner 2009; Sato 2014). Similarly, Taguchi (2014: 531) points out that due to the development of the use of collaborative completions during study abroad, they could be assessed as indicators of IC. Furthermore, from a pedagogical perspective, pair activities encouraging collaboration and providing opportunities for joint problem-solving facilitate the development of learners' interactional competence (see also Long 1996; He & Young 1998) and prepare the learners for interactions taking place outside the classroom.

In conclusion, the study has illustrated how participants maintain fluency in interaction not only individually, but also collaboratively. Instead of focusing solely on their individual contributions by presenting two monologues to each other (cf. House's 2002: 251 observations of "parallel monologues" in ELF interaction), the participants displayed mutual efforts to maintain the progressivity of talk. Therefore, focusing on the participants' individual performances when analyzing fluency in an interactional setting provides only a partial view of L2 fluency; it is equally important to acknowledge the jointly constructed nature of fluency (or confluence, McCarthy 2010; see also Lauranto 2005; Hüttner 2009). When analyzing interactional fluency, in addition to examining how cohesive links are created across turns with other-repetitions and collaborative completions (as in the present study), it is also important to pay attention to turn pauses, as they can provide an additional perspective to examining how smoothly the interaction proceeds (see Peltonen 2017). While this approach can provide a starting point for studying the collaborative aspect of L2 fluency, exploring also other ways of establishing interactional flow is essential to reach a comprehensive account of L2 fluency in interaction.

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Appendix: Transcription conventions

:	Extended or stretched sound, syllable or word.
+	Vocalic emphasis.
(.)	Micropause. A pause of less than 0.25 seconds.
(1.21)	Timed pause. A pause of 0.25 seconds or longer.
um, uh	A non-lexicalized filled pause.
heh	A separate laugh syllable (cf. chuckling talk below).
$ $	Laughing/chuckling talk between markers.
pt	Lip smack. Included in silent pause time measures, marked with curly brackets {*pt*_0.87}.
° °	A passage of talk noticeably softer than surrounding talk.
-	Halting, abrupt cut off of sound or word.
=	Latching of contiguous utterances, with no interval or overlap. (No clear pause between speakers' utterances.)
[ ]	Speech overlap.
* CAPS	Non-verbal behavior, e.g. gestures, gaze.