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Close proximity of turn-continuation to possible turn-completion in conversation

Abstract

Speakers in conversation are in the first instance allocated the space in which to produce a single unit of talk which could figure as a complete turn. One way speakers can continue talk beyond a point of possible turn-completion is by producing a continuation in maximally close proximity to the point of possible turn-completion. This article extends our understanding of how speakers do this, and to what interactional effect. Several phonetic features characterising close-proximity continuations are described. These include continuation of voicing, articulatory anticipation and other phonetic features. It is argued that close-proximity continuation helps ensure speakers get to continue their turn past a point of possible turn-completion. This argument is supported by close inspection of the talk leading up to the point of possible turn-completion, the start of the continuation, and the responses of co-participants – especially with regard to whether the point of possible turn-completion engenders incoming talk or not. The method combines analysis of phonetic and sequential details of 240 points of possible turn-completion in audio recordings of unscripted American English telephone calls.

Keywords: conversation; phonetics; pragmatics; prosody; turn-continuation; turn-taking

1 Introduction

Speakers in conversation are in the first instance allocated the space in which to produce a single unit of talk which could figure as a complete turn (Sacks, Schegloff, & Jefferson, 1974). Continuing a speaking turn past a point of possible completion therefore may require some kind of 'work' on the part of the speaker (Schegloff, 1987). Over the years some analytic attention has been devoted to how speakers continue their talk beyond a point of possible turn-completion (Couper-Kuhlen & Ono, 2007; Ford, Thompson, & Drake, 2012; Local, 1992). One way speakers can do this is by producing a continuation in maximally close proximity to a point of possible turn-completion (Local & Walker, 2012). This article extends our understanding of how speakers do this, and to what interactional effect. Techniques of sequential (turn-by-turn) and phonetic analysis are brought together to do this.

The findings emphasise several important analytic points. In order to understand turn-continuation (and thus the organisation of turn-taking) it is not sufficient to consider only syntax and action, a line suggested by findings reported by de Ruiter, Mitterer, and Enfield (2006) (though see Bögels & Torreira, 2015 where this is challenged). It is essential that as wide a range of phonetic details as possible receive due attention. They emphasise the need to make use of general phonetic techniques, rather than looking only at pitch and other prosodic features. As part of studying and describing phonetic features in the data-set, various acoustic records are presented which are important resources in phonetic analysis (spectrograms, spectra, intensity traces), but which are not generally found in work on talk-in-interaction (cf. pitch traces). For phoneticians, the findings of this study emphasise the need to consider the work done by phonetic detail in terms of the organisation of interaction (Local, 2003). This study shows how talk following a point of possible turn-completion can be joined to the talk leading up to that point. This work is thus concerned with juncture: how phonetic features

mark the boundaries between words, and between morphemes within words (Catford, 1982; Newton & Wells, 2002; Sprigg, 1957; Thompson & Howard, 2007; Wells, 1994). However, the possible interactional relevance of juncture features are generally overlooked.

Several studies have described the phonetic features which characterise the join between a turn-continuation and a preceding point of possible turn-completion. In some cases there may be a hiatus between the point of possible turn-completion and the continuation. For example, Walker (2004) presents cases of turn-continuations in English which are grammatically dependent on preceding talk which are set apart from the talk by silence (see also Schegloff, 1996, pp. 90-1). Auer (1996) argues that in German syntactically tagged-on material can be produced as part of the preceding intonation contour, or as part of a new prosodic unit; pitch, tempo, rhythm and loudness features are implicated in this integration and exposure, as well as pausing. Studies describe several types of smooth continuation of talk. For example, pivot constructions – where a turn is extended by making the end of one turn-constructional unit (TCU) the beginning of another – involve certain pitch, loudness and durational features and may involve the continuation of voicing (vocal fold vibration) between the elements of the turn (Clayman, 2012; Clayman & Raymond, 2015; Walker, 2007). Voicing may also be continued across the join between a point of possible turn-completion and a continuation in abrupt-joins (Local & Walker, 2004) and rush-throughs (Walker, 2010). Abrupt-joins and rush-throughs both involve – among other features – a dramatic speeding up as talk approaches a point of possible turn-completion. Such a speeding up was not a pre-requisite for inclusion in the current data-set, and was only observed in a handful of the identified points of possible turn-completion followed by same-speaker continuation. One way abrupt-joins differ from rush-throughs is by the presence of a pitch and loudness discontinuity in the former, and no such discontinuity in the latter; such discontinuities were not a pre-requisite for inclusion in the current data-set.

While there are accounts which deal with aspects of smooth continuation of talk into a continuation produced in close proximity to the point of possible turn-completion, there is no systematic account of this. One reason for providing such an account is that close-proximity continuation is the most frequent way turns are continued past points of possible turn-completion, not the specialised practices referred to above. This study proceeds as follows. A data-set of same-speaker continuations is assembled. Several phonetic features are described which characterise close-proximity continuations. The distribution of these close-proximity features across the data-set is described. Particular attention is paid to whether points of possible turn-completion which are the site of the close-proximity continuations engender incoming talk. It is shown that, in general, these close-proximity continuation sites do not engender incoming talk, and that where they do engender incoming talk, this incoming is restricted.

The main argument being put forward is that by continuing a turn in close proximity to a point of possible turn-completion, speakers help ensure that they will get to continue their turn past that point. This argument is supported by close inspection of the talk leading up to the point of possible turn-completion, the start of the continuation, and the responses of co-participants – especially with regard to whether the point of possible turn-completion engenders incoming talk or not.

Data and methods are described in section 2. An account of the recurrent phonetic features of close-proximity continuation is provided in section 3; an account of the distribution of these features and how co-participants respond is provided in section 4. Some conclusions are provided in section 5.

2 Data and methods

The data are taken from the CALLHOME American English Speech corpus (Canavan, Graff, & George, 1997). The corpus consists of unscripted telephone conversations, mostly between family members or friends. At the time of writing complete audio recordings and orthographic transcriptions of a portion of each conversation were available via http://talkbank.org/CABank/. The recordings are generally of a high quality and allow for reliable auditory and acoustic analysis. Each speaker is recorded on a separate channel so each speakers' talk can be inspected without interference from the other speaker.

Analysis focuses on the transcribed portion of 12 calls in the corpus. Calls were selected to balance equal numbers of male and female callers and call-receivers. Callers of different ages were selected, from various geographical locations around the US. These steps were taken to account for the possibility that patterns might be affected by speaker background. Points in the talk of the caller were identified which, on the basis of syntactic structure and action, might legitimately engender turn-transition (i.e. be responded to with more than a continuer or receipt), and which were followed by more talk from the caller. Focussing on points of possible turn-completion followed by same-speaker continuation will help to reach a better understanding of the role of phonetic features in talk-projection; to date most research has focussed on turn-projection. The talk which followed the point of possible turn-completion could be a syntactically dependent extension of the prior talk or a new syntactic unit. While it is widely acknowledged that the phonetic design of talk plays a role in the treatment of talk as possibly complete, there is no consensus as to what constitutes 'possible completion' in the phonetic domain (see Walker, 2017, for a review). The phonetic design of talk was therefore not taken into account in determining points of possible completion. The first 20 such points in the transcribed talk were identified. This yielded a total of 240 points of possible turn-completion followed by same-speaker continuation.

In accordance with an established research tradition analysing phonetics and talk-in-interaction, these points were subjected to combined auditory and computer-based acoustic analysis (Local & Walker, 2005; Walker, 2013). Computer-based analysis was conducted using Praat (Boersma & Weenink, 2016). Various different acoustic records (spectrograms, waveforms, pitch traces, intensity traces) are used to complement the verbal descriptions. All features described can be heard in the original audio.

3 Phonetic features of close proximity

This section describes phonetic aspects of continuing a turn in close proximity to a point of possible turn-completion. Several close-proximity features are described: continued voicing, articulatory anticipation and certain other features which contribute to the smooth continuation of the turn from the point of possible turn-completion into more talk. There may be one close-proximity feature, or more, in a single close-proximity continuation. Close-proximity features in effect close up the join between talk leading up to the point of possible turn-completion and the continuation which follows it. Articulatory anticipation does more than this, and projects the production of more talk beyond the point of possible turn-completion.

3.1 Continued voicing

The first close-proximity feature to be described is the continuation of voicing through the continuation site i.e. from the talk leading up to the point of possible turn-completion into the continuation. An example is provided in (1). Transcriptions, prepared by the author, are presented as simply as possible to enhance readability while reflecting aspects of the sequential organization of the talk. The caller is always identified as A and the call-receiver as B. The final word leading up to the point of possible turn-completion under examination is shown in bold; other lexical items of interest may be shown in upper case. This means that

there may be other points of possible turn-completion (which may be followed by close-proximity continuation, or not) which are not highlighted in the transcription but which are included in the study. The header to each excerpt identifies the call the excerpt can be found in, which of the 20 identified points of possible turn-completion is being presented, and the time through the call where the continuation occurs. Other transcription conventions are listed in Appendix A.

Continued voicing can be heard in (1) where there is no break in voicing between "Morocco" (the point of possible turn-completion) and "you" (the first word of the close-proximity continuation).[1]

(1) 6071:9, 356 s

1 A: why do you have to go to **Morocco** you know they- they like (.) they- they
2 rape women there

[Figure 1 about here.]

Figure 1 shows a spectrogram and waveform of part of "Morocco you". (Throughout this article figures show speech corresponding to the underlined portion of the figure caption; where there is no underlining all of the speech represented by the caption is shown in the figure.) The release of the closure for the velar plosive [k] in "Morocco" can be seen at point A; voicing for the vowel starts up shortly (14 ms) after release evidenced by the onset of quasi-periodicity (roughly repeating pattern) in the waveform and striations in the spectrogram. Voicing continues all the way through the join with "you" (the point of maximum constriction where the tongue is closest to the roof of the mouth is at point B) and through the rest of that syllable. In other words, at no point does voicing cease between "Morocco" and "you": the speaker is producing talk continuously without any kind of break.

Note also the amplitude of the continued voicing in Figure 1, which is sustained through the continuation site. This illustrates the general tendency for loudness to be maintained where voicing continues through the continuation site. When voicing ceases at the end of a turn there is usually a gradual decrease in amplitude. Figure 2 shows intensity trajectories for vowels which lead up to points of possible turn-completion and which are followed by same-speaker continuation beginning with a vowel. Figure 2a shows intensity trajectories where voicing continues into a vowel at the start of a close-proximity continuation; Figure 2b shows intensity trajectories where voicing ceases and a continuation is launched after a break. For each vowel, the first measure is taken at the intensity peak in the last syllable. Where there is continued voicing (n = 12; Figure 2a), the final measure is taken at the intensity minimum following the peak, or in the cases of steady decline into the vowel which follows, from the end of articulation of the vowel. (There were 2 cases with continued voicing which did not have an intensity minimum: one where intensity increased over the course of the final vowel, and another where it was in effect level. These are excluded from the quantified measures and visual representations.) Where there is no continued voicing (n = 15; Figure 2b), the final measure is taken at the beginning of the last glottal pulse identified from inspection of the waveform and spectrogram. To examine the intensity trajectory of each vowel and to take into account durational differences between tokens, intensity was measured at 10% increments between the first and final measures. In the figure, time runs left to right along the

[1] Possible turn-completion was determined on the basis of the conversational context in which the utterance was produced. Note the other points of possible turn-completion earlier in A's turn which, in other conversational contexts, might represent points of possible turn-completion ("why", "why do you", "why do you have to", "why do you have to go"). However, they are not points of possible turn-completion in this conversational context and were therefore not included in this study.

x-axis; intensity is expressed in deciBels (dB) relative to the first measure for each vowel to take into account differences in overall intensity across recordings. Thick continuous lines in each plot connect the average values at each measurement point; other lines within each plot represent the intensity trajectory of single tokens.

[Figure 2 about here.]

It can be seen that, in general, the drop in intensity is much greater when voicing ceases (mean drop where voicing ceases = 11.7 dB; mean drop where voicing is continued = 3.8 dB). It thus is not simply a matter of speakers sustaining vocal fold vibration through the continuation site: it is also a matter of maintaining loudness.

Continued voicing might only be expected where there are phonologically voiced sounds on either side of the join as in (1). But in some cases there can be continued voicing where a cessation might be expected, i.e. where there is a phonologically voiceless sound at the end of the talk leading up to the point of possible turn-completion. An example is shown in (2), where the talk leading up to the point of possible completion ends with "right": a word which has, in citation form at least, a voiceless alveolar plosive [t] at its end. In (2) voicing continues without a break from "right" into the following "it's".

(2) 4247:15, 228 s

1 A: because you know affirmative action's really under attack in the United States
2 o- from many different quarters **right** it's and it's a big .hhhh it's a big issue

Figure 3 shows a spectrogram and waveform of part of A's turn. The beginning of "it's" is marked at point A. Striations can be seen in the spectrogram, and periodicity in the waveform throughout this stretch.

[Figure 3 about here.]

In summary, voicing can be continued from the talk leading up to the point of possible turn-completion into the talk which follows. This continuation of voicing may occur where the sounds are not phonologically voiced.

Voicing is continued in 78 out of 140 cases where phonologically voiced sounds occur either side of the point of possible turn-completion (56%); there are 11 cases of continued voicing where either the talk leading up to the point of possible turn-completion ends with a phonologically voiceless sound, the continuation begins with a phonologically voiceless sound, or there are phonologically voiceless sounds on either side of the point of possible turn-completion.

3.2 Articulatory anticipation

The second close-proximity feature to be described is articulatory anticipation of the talk which follows the point of possible turn-completion. Speech-sounds leading up to a point of possible turn-completion can be produced in such a way that they anticipate, and thus project, the production of more talk. Recurring features of articulatory anticipation where the talk leading up to the point of possible turn-completion ends with a vowel are changes from the expected vowel quality to a quality which projects the production of the next sound. Where the talk leading up to the point of possible turn-completion ends with a consonant, the resonance of the consonant (including the release of word-final plosives) may project the next sound. The place of articulation of the consonant leading up to the point of possible turn-completion may change to match the place of articulation of the sound at the start of the continuation, thus projecting the continuation of the turn.

An example of articulatory anticipation is shown in (3).

(3) 4595:4, 151 s

1 A: that's not true
2 B: myeah[:
3 A: [that you wouldn't even be able to go **back** because you know that you
4 know::: [as
5 B [others there's other (.) possibilities

In a canonical production "back" ends with a velar plosive [k]. In (3), "back" ends with bilabial closure. Acoustic evidence of this bilabial closure is shown in Figure 4. The figure shows spectrograms and waveforms of two words by the same speaker, both of which end with [k] in citation form. Overlaid on the spectrograms are dots generated by Praat tracking the frequency of the first and second formants (F1 and F2). At the end of "back" (Figure 4a) the bilabial closure causes the frequency of F2 to fall from 1770 Hz at point A to less than 1640 Hz when the constriction is formed at point B. A canonical velar closure causes the frequency of F2 to rise as the closure is formed. This can be seen at the end of "Trek" (Figure 4b). The frequency of F2 rises as the closure is formed, with complete closure achieved at point A by which time the frequency of F2 is above 2000 Hz. The bilabial closure at the end of "back" in (3) occurs as the speaker anticipates (projects) the production of a next word which begins with bilabial closure ("because"). The bilabial closure is released into the vowel for the word which follows (see section 3.3). Following Catford's (1982) study of juncture, this could be referred to as articulatory overlap and an example of 'close transition'. There is no basis for articulatory anticipation as in (3) at the end of "Trek": in (4), the close-proximity continuation which follows "Trek" does not begin with a bilabial closure. Note too that the point of possible turn-completion in (4) engenders incoming talk, whereas in (3), where the final closure anticipates more talk, it does not.

(4) 4595, 398 s

1 A: I've gotten into this bad habit of remember when I was an undergrad and I
2 used to watch Star TREK re[runs and the Twilight] Zone]
3 B: [oh really you're watching] diyeheheh]

[Figure 4 about here.]

Another case of articulatory anticipation, involving a different type of sound from (3), is shown in (5). During the alveolar fricative [s] produced at the end of the word "next" (there is no final closure for [t]) the lips can be heard to become increasingly rounded.

(5) 4521:18, 175 s

1 B: so when are you when is your classes over
2 A: .hhhh (0.5) on (.) next Friday (.) not this one the **next** one
3 (0.2)
4 B: you have a [final
5 A: [that's my finals

This change is reflected in the spectrogram of this word shown in Figure 5.

[Figure 5 about here.]

Audible friction for [s] begins at point A in Figure 5a and continues to point D, by which point energy is concentrated at a lower frequency. This change in energy concentration is also shown by the spectra in Figure 5b. (All spectra were created with a window length of 10 ms and a Gaussian window.) The spectrum drawn with a solid line is taken 20% into the audible alveolar friction (point B in Figure 5a); the spectrum drawn with a dashed line is taken 80% into the audible friction (point C). Energy at lower frequencies is much greater in the 80% spectrum than in the 20% spectrum. This change in the distribution of energy corresponds to the percept of increased rounding of the lips as the fricative progresses (Mann & Repp, 1980). This rounding anticipates the production of talk beyond the point of possible turn-completion which will begin with a sound made with rounded lips ("one").

The token of "next" in (5) can be compared with the same speaker's later production of "next" in "next day" in (6). In that case, the next sound is not rounded and there is no audible change in lip position during [s].

(6) 4521, 206 s

1 A: it was (0.2) the main purpose of missing it was .hhhh so I'd miss it right I'd
2 come back the NEXT day
3 B: uh h[uh
4 A: [and I'd ask the chick for the notes

A spectrum taken 80% into the audible friction for [s] in "next" in (6) is shown in Figure 5 with a dotted line. Energy is concentrated at a higher frequency than at the end of the token in (5). With no rounded sound to anticipate in (6), the fricative is not rounded.

In summary, in (3) and (5) the speakers are producing the continuation in maximally close proximity to a point of possible turn-completion. That close proximity results in articulatory overlap: speakers are articulating speech-sounds towards the end of one word in such a way that projects the production of more talk beyond the point of possible turn-completion. Articulatory anticipation is evident in 36 cases, or 15% of cases of possible turn-completion. However, it should be noted that articulatory anticipation is not possible in all cases: for example, 7 cases (3%) have consonants with the same place of articulation leading up to and immediately after the point of possible turn-completion.

3.3 Other close-proximity features

The previous sections have described two methods in producing a continuation in close proximity to a point of possible turn-completion: continuation of voicing and articulatory anticipation. This section draws together some of the other close-proximity features evident in the data-set. Other close-proximity features are evident in 83 cases in the data-set (35%). One way to produce a continuation in close proximity to a point of possible turn-completion is to release a final plosive directly into the following sounds without any kind of hiatus. This can be heard in (7) and (8).

(7) 4065:15, 661s

1 A: had that **happened** already
2 B: no that had not happened no

(8) 4247:8, 208 s

1 A: he does believe that affirmative action is necessary .hhh to move uh (.) you
2 know black Americans .hhh forward and to give them the opportunities that
3 they've been **denied** so he's trying to ki- kinda walking a tightrope you know
4 what I'm saying
5 (0.5)
6 B: right

In (7) the alveolar plosive [d] is released into the vowel which follows and there is no interruption in voicing which continues throughout the continuation site. Figure 6a shows a spectrogram and waveform of a relevant portion. Point A marks the onset of voicing for the second syllable of "happened"; Point B marks the release of [d] at the end. It can be seen from the periodicity in the waveform and corresponding striations in the spectrogram from point A to point B and beyond that voicing continues throughout this portion and into the vowel which starts the continuation: the final plosive is released into the following vowel without any kind of break, or even dip in amplitude.

Close proximity is also evident in (8): as soon as the alveolar plosive [d] is released audible friction begins for the alveolar fricative [s] at the start of the continuation. In Figure 6b, point A marks the release of the closure for the alveolar plosive [d] at the end of "denied" which was formed c. 50 ms earlier. The fricative at the start of "so" follows the release immediately without a break: notice on the spectrogram the high frequency energy generated by the fricative begins immediately after release of the closure.

[Figure 6 about here.]

Examples (9) and (10) provide examples of close proximity with different types of sound at the end of the talk leading up to the point of possible turn-completion from (7) and (8). In (9) there is no break between the fricative at the end of "quarters" and the initial approximant in "right": audible friction continues up until the onset of that initial sound. In Figure 7a point A marks the onset of audible friction for the final sound in "quarters"; point B marks the start of the initial sound in "right". The high frequency noise continues without a break between these two points.

(9) 4247:14, 228 s

1 A: you know affirmative action is really under attack in the United States o- from
2 many different **quarters** right it's and it's a big .hhhh it's a big issue

[Figure 7 about here.]

In (10) an audible inbreath follows in close proximity to a point of possible turn-completion, and is itself followed by more talk.

(10) 4247:8, 202 s

1 A: Clinton just came out and sai:d that he:: (0.2) doesn't believe .hh (0.2) in quota
2 systems .hhh (0.2) and in reverse discrimination but that he does believe that
3 affirmative action is **necessary** .hhh to move uh (.) you know black Americans
4 .hhh forward

The inbreath in line 3 occurs in close proximity to the talk leading up to the point of possible turn-completion, and the continuation ("to move. . . ") is produced in close proximity to the inbreath. Point A in Figure 7b marks the onset of audible inbreathing, shortly (less than 30

ms) after the cessation of voicing for the preceding vowel. Point B marks the end of the audible inbreath. A closure for the initial alveolar plosive [t] in "to" is released at point C, approximately 90 ms after the end of audible inbreathing. While it takes time to switch from egressive (outward) airflow to ingressive (inward) airflow for the inbreath (and vice versa), the impression here is of the speaker making that switch as quickly as possible. This is not always the case with inbreaths: for instance, after the inbreath in line 1 of (10) approximately 180 ms pass between the end of audible inbreathing and the onset of the talk following it. So, while in (10) there is an inbreath between the talk leading up to the point of possible turn-completion and the continuation, as in other examples of close-proximity continuation presented so far there is still close proximity of each event: the inbreath is produced in close proximity to the preceding talk, and the talk which follows the inbreath (the continuation) is produced in close proximity to the inbreath.

4 Distribution of close-proximity features in a set of same-speaker continuations, and how co-participants respond

The previous section described phonetic features (close-proximity features) which allow a speaker to continue a turn in close proximity to a point of possible turn-completion (close-proximity continuation). This section discusses the relationship between close-proximity features/continuation and turn-holding.

4.1 Frequency of occurrence of close-proximity features

Within the set of 240 same-speaker continuations after a point of possible turn-completion, the majority (178; 74%) are close-proximity continuations. So when speakers continue past a point of possible turn-completion, close-proximity features occur frequently. Note too that close-proximity features are not expected every time a speaker continues past a point of possible turn-completion: as described in the model of turn-taking set out by Sacks et al. (1974), a speaker may elect to continue their talk after co-participants have passed up on the opportunity to speak.

The close-proximity features project the production of more talk, and help ensure that if a co-participant does start up talk they will find that the current speaker is already occupying the floor and that they have already indicated through the phonetic design of their talk that they have more to say.

4.2 Incoming talk

A further reason for concluding that there is a relationship between close-proximity features and turn-holding is that when co-participants start up their talk, this is usually not after a point of possible turn-completion followed by close-proximity continuation. The annotations supplied with the CALLHOME corpus were examined to identify non-empty intervals in speaker B's talk, between the beginning of the transcription and the end of the interval in speaker A's talk containing the final point of possible turn-completion identified in this study. These non-empty intervals are a proxy for incoming talk from speaker B. There are 309 non-empty intervals. Non-empty intervals beginning in the 500 ms following a point of possible turn-completion were taken as potentially responsive to that point of possible turn-completion. (A cut-off of 500 ms reflects work findings from research on turn-transfer: Levinson and Torreira (2015) present average floor transfer offsets in several languages from several studies, all of which are below 500 ms. Furthermore, Levinson and Torreira engage in a new study of gaps and overlaps in the Switchboard corpus of US English telephone conversations: approximately 52% of floor transfer offsets are less than 500 ms, with modal values between 100 and 200 ms.)

Of the 309 cases of incoming talk identified, 25 (8%) are within the 500 ms following a point of possible turn-completion where close-proximity continuation occurs. Inspection of these 25 cases reveals that 12 are responding to or anticipating a successive point of possible turn-completion. This means that of the 178 close-proximity continuations, only 13 (7%) engender incoming talk. This suggests that close-proximity features are effective at inhibiting incoming talk at points of possible turn-completion.

Points of possible turn-completion followed by close-proximity continuation and which engender incoming talk may be taken as evidence that close-proximity features are limited in terms of turn-holding. They therefore deserve closer consideration. Where a point of possible turn-completion followed by close-proximity continuation engenders incoming talk, this incoming is often restricted. In almost half of the cases (6/13, 46%) the incoming is a full but brief turn or laughter. An example of the former is shown in (11). (An arrow in the margin identifies the start of the relevant incoming in this section.)

(11) 4521:11, 154 s

1	A:	oh yes sorry **sugar** tha[t's right
2 →	B:	[yeah
3		(2.0)
4	B:	yeah you gotta watch the su[gar
5	A:	[mm hm

In 4/13 cases (30%) where a point of possible turn-completion followed by close-proximity continuation, the incoming talk is more extensive and both speakers continue their talk. An example is shown in (12).

(12) 4065:2, 547s

1	A:	how are you guys how is **Chris** [and how are you
2 →	B:	[well pretty well Chris is not is not here at the
3		moment

In cases such as (11) and (12) the continuation by the current speaker, undisturbed by the incoming talk, shows the current speaker's orientation to the legitimacy of continuing at that point. It can also be noticed that the incoming talk is not interruptive: it aligns with the activity promoted by the current speaker, and is not designed as competitive (Kurtic, Brown, & Wells, 2013).

Of the 178 close-proximity continuations, there are only 2 cases where the point of possible turn-completion engenders incoming talk, the continuing speaker drops out and the incoming speaker continues with a full turn. One of these cases is shown in (13), where the incoming talk is designedly competitive.

(13) 4184:13, 306s

1	B:	I have to think about that
2	A:	okay
3		(0.7)
4	B:	.pt [.hh]
5	A:	[**okay**] .h[h [will]
6 →	B:	[I t[old] him how many rolls I wanted
7		(0.7)
8	A:	uhu[h
9	B:	[uhm
10		(0.6)
11	B:	did he- (0.2) I told him I wanted ten two and a quarter

In line 5 A produces “okay”. This is a point of possible turn-completion. He immediately breaths in with a high velocity inbreath which projects more talk, cf. (10). Approximately 140 ms after the start of that inbreath, B starts up her talk (line 6). This incoming is competitive: it is loud and has high pitch and a wide pitch span. This incoming can be compared with her talk at line 11, which is produced in the clear (i.e. out of overlap) and non-competitively. Restricting the comparison to that part of the turn which is the same in both cases (“I told him”), the first version has a span of 9.7 ST with a mean pitch of 316 Hz; the second version has a span of 6 ST and a mean pitch of 214 Hz (6.7 ST lower than the mean for the first). Pitch traces and waveforms of the two versions are shown in Figure 8; pitch is presented on a y-axis representing the bottom and top of the speaker’s normal speaking pitch range (see Walker, 2017, for a description of the method used in estimating the speaker’s pitch range). Intensity measures cannot be reliably compared as the first version is so loud that the signal is clipped; the second is much less loud and not clipped. However, an impression of the difference between the two is conveyed by the amplitude of the waveforms in Figure 8.

[Figure 8 about here.]

In designing her talk as competitive, B is orienting to A as legitimately continuing his turn when she starts her talk at line 6: if this was a legitimate point for B to begin, there would be no basis for designing the start of her turn in line 6 as competitive.

It might be argued that close-proximity features do not particularly help ensure that the current speaker gets to continue a turn, but that co-participants are simply choosing not to come in at those points. The case in (14) provides evidence that co-participants may be looking for a point to begin their talk, yet a point of possible turn-completion accompanied by close-proximity features occurs without engendering incoming talk.

(14) 6071:7, 323 s

1	A:	shit I'd probably get like raped and killed and drawn and quartered they're
2		probably going to sell me into white slavery on the way .hh
3		[you know] they
4	B:	[.hh]
5	A:	do **that** in morocco
6		(0.3)
7	A:	.hh
8	B:	!t oh yeah but it's I mean it's- ih- (.) I mean .hhhh peopu- I've been to
9		Colombia before I went to Colombia I'm like .hh they're going to skin me
10		alive and it was this really civil place

B produces an audible inbreath (line 4), what Schegloff calls a 'turn-pre-beginning' (Schegloff, 2000, p. 15; Schegloff, 1996, pp. 92-3). This is an audible indication that B has talk to offer. On finding himself in overlap with A's "you know" (line 3), B holds off. It is to be expected that B will start up at the next possible opportunity. In terms of syntax and action, that opportunity is at the end of "they do that". Given B's turn-pre-beginning at line 4 there is every reason to expect B would come in at that point. However, he does not. There is continued voicing here, with the final sound in "that" produced as a voiced tap. The turn-continuation in line 5 is therefore a close-proximity continuation, and the co-participant does not come in at the continuation site despite his previous indication that he will.

In summary, there is evidence from the distribution of close-proximity features in the data that these features performing a turn-holding role. Same-speaker continuations are often accompanied by close-proximity features. Participants themselves treat the points of possible turn-completion accompanied by close-proximity features as legitimate sites of turn-continuation.

4.3 Outcomes after points of possible turn-completion followed by same-speaker continuation without close-proximity features

It has been shown that points of possible turn-completion followed by same-speaker continuation with close-proximity features do not regularly engender incoming talk. A stronger link between close-proximity features and turn-holding could be shown if points of possible turn-completion followed by same-speaker continuation without close-proximity features regularly led to different outcomes from points of possible turn-completion followed by same-speaker continuation with close-proximity features; for example, if points of possible turn-completion followed by same-speaker continuation without close-proximity features regularly engendered incoming talk.

There are 62 cases of possible turn-completion followed by same-speaker continuation without close-proximity features, 7 of which (11%) are followed by incoming talk (non-empty intervals in the transcription) in the 500 ms following the point of possible turn-completion. Closer consideration of these 7 cases reveals that 4 are responsive to or anticipating a successive point of possible turn-completion. In other words, of the 62 cases of possible turn-completion followed by same-speaker continuation without close-proximity features, only 3 cases (4%) engender incoming talk. While points of possible turn-completion followed by same-speaker continuation with close-proximity features rarely engender incoming talk, points of possible turn-completion followed by same-speaker continuation without close-proximity features rarely engender incoming talk either.

A possible conclusion which could be drawn from these observations is that the close-proximity features described do are not required to inhibit incoming talk. Nevertheless, recall

how often close-proximity features accompany same-speaker continuations (in 74% of cases). It is also worth noting the low number of incomings in the data as a whole: of 240 points of possible turn-completion followed by same-speaker continuation, only 16 (7%) were judged to have engendered incoming talk. The low incidence of incoming talk might be because the points of possible turn-completion studied are simply the first 20 such points in each of the 12 identified calls, and are thus not necessarily auspicious environments for turn-transition. In the account of turn-taking provided by Sacks et al. (1974), they note that at points of possible turn-completion where no next speaker has been selected "self-selection for next speakership may, but need not, be instituted" (Sacks et al., 1974, p. 704). A more auspicious environment for a change in speakership (for example, where a speaker produces a question then continues) might be explored. If, as is the suggestion here, close-proximity features play a role in turn-holding, then the prediction would be that where points of possible turn-completion are followed by same-speaker continuation with close-proximity features, these only rarely engender incoming talk, and any incoming talk would be restricted; where points of possible turn-completion are followed by same-speaker continuation without close-proximity features, incoming talk would be a significantly more frequent occurrence and not subject to such restrictions.

4.4 Distribution of the features over the time-course of the turn

If close-proximity features were only evident in the continuation, while they may be able to play a part in fending off incoming talk, they would not be able to work against the incoming talk occurring in the first place. However, close-proximity features are also evident in the talk leading up to the point of possible turn-completion. Most obviously, articulatory anticipation is evident in the talk leading up to the point of possible turn-completion. Continued voicing is also evident in that talk, in two distinct ways. First, as pointed out above, phonologically voiceless sounds can be produced with voicing in anticipation of what is to come. A hearer encountering a voiced production of a final sound which is phonologically voiceless will expect talk to continue. Second, continued voicing may be apparent some time before the point of possible turn-completion through maintained loudness. Figure 2 shows that the average intensity trajectories begin to diverge some time before the end of the tokens: the difference between the two average trajectories steadily increases so that by the midpoint the difference between the two is 1.1 dB, 4.3 dB at 80% and 7.9 dB at the end. Differences in intensity trajectories depending on whether or not voicing will continue mean that information about the continuation of voicing may be evident some time before articulation of the talk leading up to the point of possible turn-completion ends. Maintaining loudness when projecting the production of more talk also has a practical value: it means that if a co-participant does start up, the ongoing talk will be relatively loud. The presence of close-proximity features in the talk leading up to the point of possible turn-completion (rather than in the continuation) helps to explain the general lack of incoming talk at or just after the continuation site in these data. A proliferation of aborted incomings would have suggested that the close-proximity features help to fend off an incoming speaker, but do not militate against an incoming happening in the first place.

4.5 Relationship with other talk-projecting phonetic features

A further issue which requires consideration concerns the relationship between close-proximity features and other talk-projecting features. It might be argued that the reason continuation sites accompanied by close-proximity features do not engender incoming talk is not because of the close-proximity features, but because some other feature(s) is (are) projecting more talk. Therefore, if continuation sites accompanied by close-proximity features and which exhibit other known talk-projecting features were excluded, that would strengthen the case that close-proximity features help ensure that the current speaker gets to continue a turn. The points of possible turn-completion identified in this study were examined for two talk-projecting features identified by Local and Walker (2012): reduction of vowels and

consonants, and an absence of durational lengthening. Of the 178 points of possible turn-completion followed by close-proximity continuation, 106 (60%) do not have these other talk-projecting features. Furthermore, incoming talk at the continuation site is still infrequent where there are only close-proximity features, and only very slightly more frequent than where there are other talk-projecting features (12% of close-proximity-only continuation sites engender incoming talk versus 10% of all close-proximity continuation sites). It seems then that a continuation site accompanied by only close-proximity features is as (un)likely to engender incoming talk as a continuation site also accompanied by other talk-projecting features.

It might also be supposed that pitch features may be projecting more talk in some, or even all, of the cases of possible turn-completion followed by same-speaker continuation. Of the 240 points of possible turn-completion examined here, 51 (21%) exhibit pitch characteristics which can be glossed as 'fall to low': there is falling pitch leading up to the point of possible turn-completion, ending low in the speaker's range (see Walker, 2017, for details). Of those 51 cases of fall-to-low at a point of possible turn-completion followed by same-speaker continuation, 17 (33%) are accompanied by close-proximity features. In this set of 17 cases, incoming talk at the continuation site is rare, occurring in just 2 cases. In both of those cases the incoming is restricted to a short acknowledgement token (one instance was shown in (11) above). While it is not possible to be sure all possible talk-projecting features have been taken into account, even when pitch is indicating that talk is possibly complete, and other features which are known to project more talk are absent, speakers can launch a close-proximity continuation with little chance of engendering an incoming. Close-proximity features alone thus seem to be sufficient to project the production of more talk and help ensure that the current speaker gets to continue a turn.

5 Conclusions

It has been shown that speakers may produce a turn-continuation in close proximity to a point of possible turn-completion. Various phonetic aspects of this close proximity have been described, including features of phonation and articulation. It has been shown that in general, these close-proximity continuation sites only rarely engender incoming talk. This is the case even where other phonetic features (pitch) indicate that the talk is possibly complete. It is the contention of this article that these close-proximity features represent resources for speakers to use to help ensure that they secure the space to continue talk past a point of possible turn-completion. This contention is based on findings arising from a study which combines analysis of phonetic details and sequential organisation, whereas just one of these domains is usually studied. Single episodes of interaction, as well as the aggregate, were considered in order to provide a more complete account of close-proximity features and how they are deployed and treated by interactants.

This study has reported on a range of phonetic features. This study has shown that it is not only prosodic features which are important in terms of projecting the production of more talk beyond a point of possible turn-completion. Close proximity manifests itself through articulatory and phonatory aspects. This emphasises the need for researchers to deal with as wide a range of phonetic features as possible when trying to get to grips with the organisation of talk-in-interaction. Simply put, a specific focus on pitch, or any other phonetic parameter, must be warranted and cannot be taken as a default starting point. Terminology, methods and modes of presentation not usually encountered in work on the phonetics of talk-in-interaction have been used (see Walker, 2013, for a review of work in that area). This has been done in the hope that it might facilitate further, more open-minded and more technically informed accounts of talk-in-interaction. This more open-minded approach is warranted by the findings of this study, and others.

Phonetic features which might be considered part and parcel of casual speech, and as the outcome of various connected speech processes and economy of effort, have been shown to be interactionally meaningful. For example, articulatory anticipation (assimilation) is not only something we should consider in terms of physical movements arising from a given phonological context. We need to recognise it as a resource for indicating to a co-participant that there is more talk to come. In other words, such connected speech features need to be inspected not (only) for their physiological and perceptual characteristics, and for what they can tell us about theoretical constructs, but for how they are used by participants engaged in talk-in-interaction.

A Transcription conventions

Lines of transcription are numbered consecutively so that specific parts of the transcription can be identified in the text. Turns at talk run down the page with the speaker identified to the left of the transcribed speech; where no speaker is identified for transcribed speech, the speaker is the same as for the previous line of transcription.

[	onset of overlapping (simultaneous) talk
]	the end of overlapping talk
(0.2)	silence measured in seconds
(.)	silence of less than one tenth of a second
hh	audible outbreathing, each 'h' indicating one tenth of a second
.hh	audible inbreathing, each 'h' indicating one tenth of a second
-	oral or glottal cut-off
!	click, place of articulation indicated by following characters
bold	final word leading up to the point of possible turn-completion under examination
CAPS	may identify other lexical items of particular relevance to the discussion

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List of figures

Figure 1 “Morocco you” in (1)

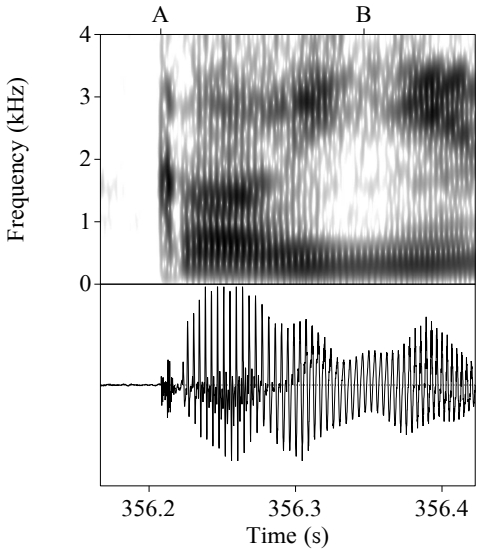
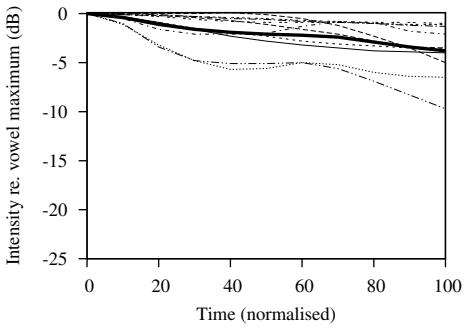
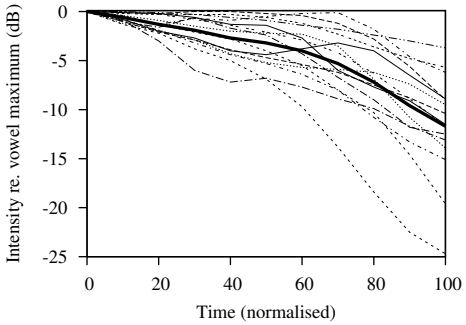


Figure 2 Intensity trajectories in vowels before points of possible turn-completion, followed by a vowel



(a) where voicing is continued



(b) where voicing ceases

Figure 3 “right it’s” in (2)

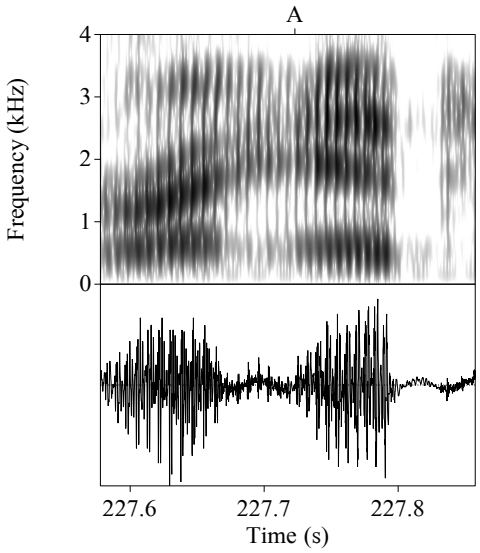
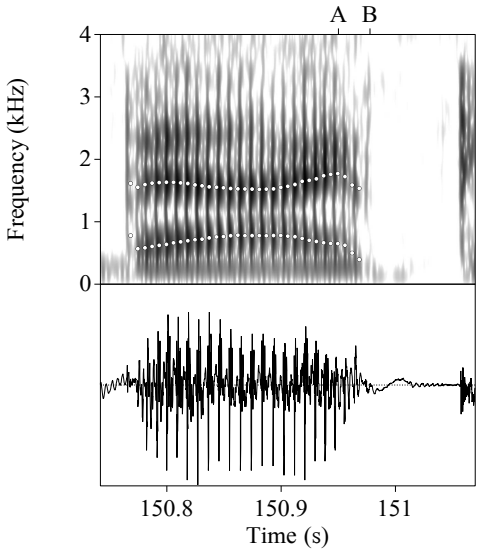
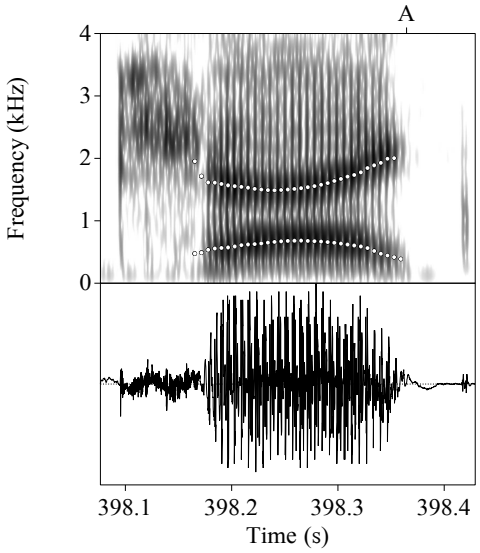


Figure 4 Representations of (3) and (4)

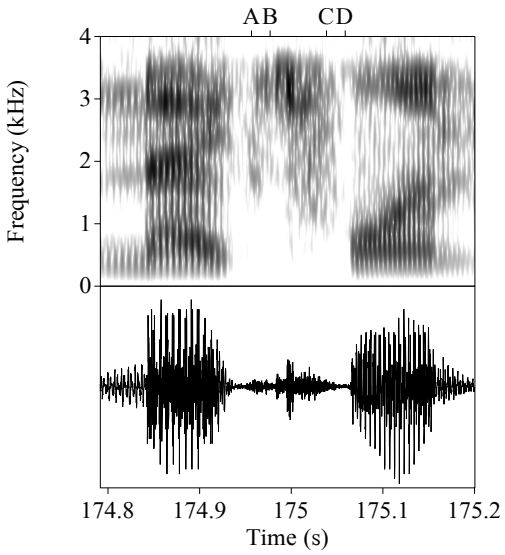


(a) “back” in (3)

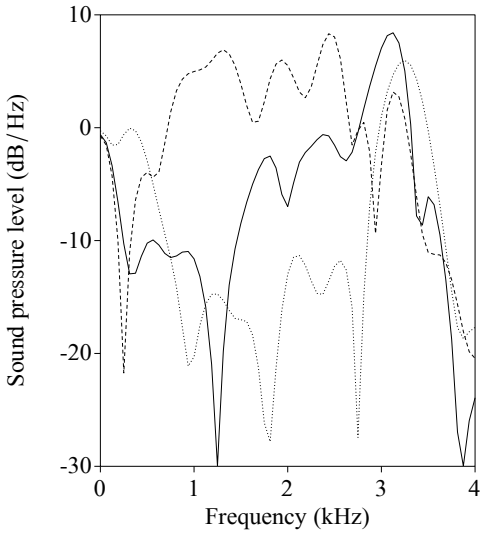


(b) “Trek” in (4)

Figure 5 Representations of (5) and (6)

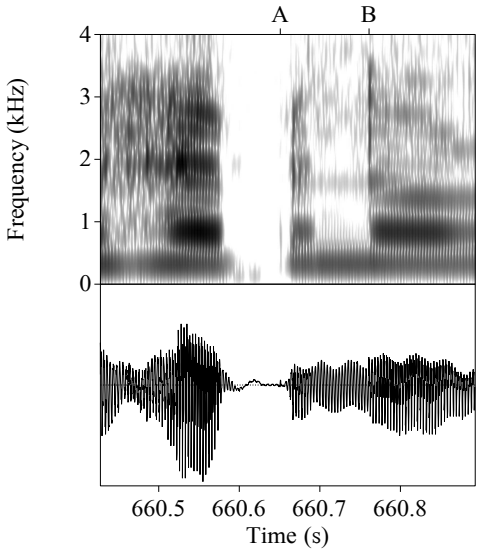


(a) “next one” in (5)

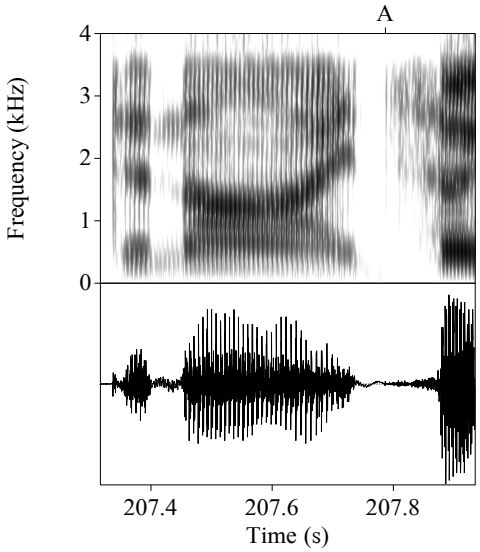


(b) solid line = point B in Figure 5a; dashed line = point C in Figure 5a; dotted line = 80% into the audible friction for [s] in “next day” in (6)

Figure 6 Representations of (7) and (8)

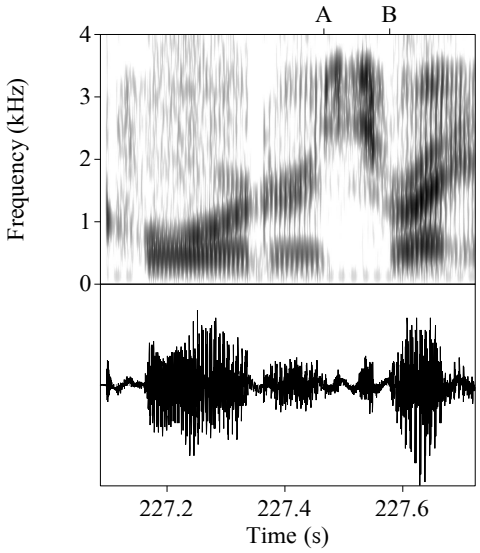


(a) “happened al…” in (7)

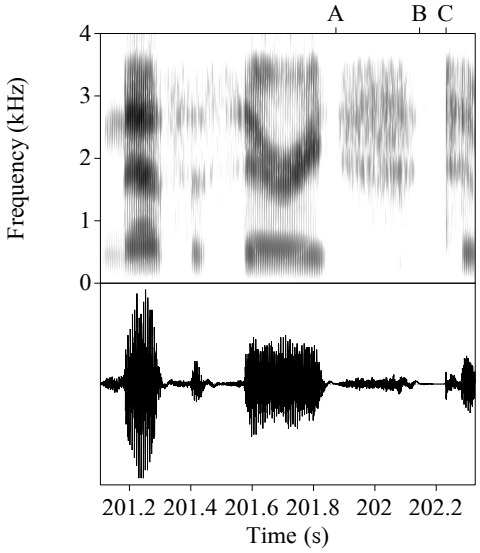


(b) “denied so” in (8)

Figure 7 Representations of (9) and (10)

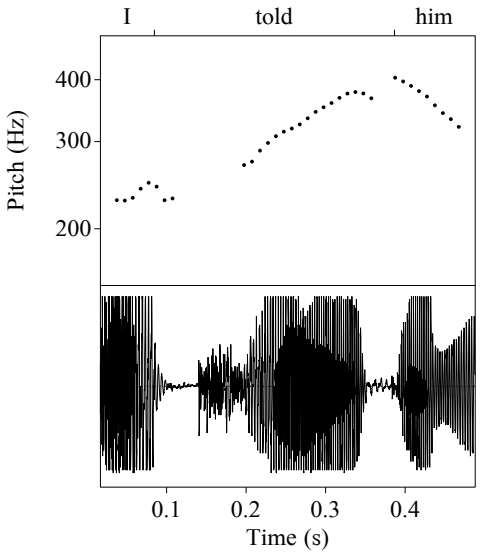


(a) “quarters right” in (9)

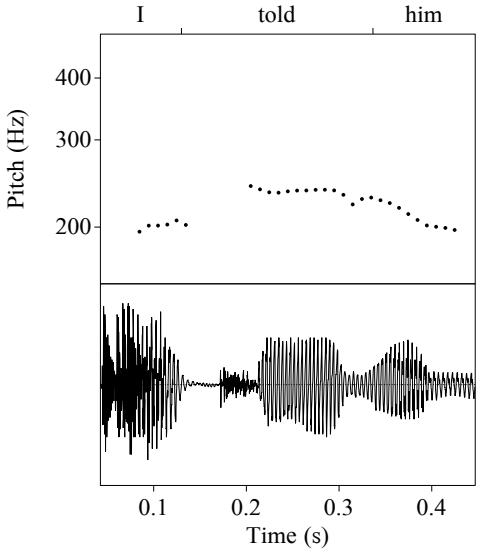


(b) “necessary…to” in (10)

Figure 8 Pitch traces and waveforms of “I told him” in (13)



(a) line 6



(b) line 11