

Two Sides of the Same Coin: An Examination of Hallidayan and Schegloffian Accounts of Pitch Accent in Natural English Conversation

George O'Neal

Abstract

Both Halliday and Schegloff claim that pitch accents have certain functions: Halliday claims that pitch accents collocate with new information in conversations; Schegloff claims that pitch accents signal imminent turn change. The intonation and pitch-accents that appeared in the first three minutes of one recorded natural English conversation were examined, and correlations to the behavior of pitch accents predicted by the two theories were tabulated in order to determine which theory better reflects the praxis of natural English conversation. It was discovered that both theories make reasonably accurate predictions of the behavior of intonation in conversational praxis: 55% of the pitch accents collocated with content words that represented new information, confirming to a degree Halliday's theory of pitch accent placement, although by no means categorically; on the other hand, 55% of the turn changes in the data occurred on a point of syntactic completion with a pitch accent on it or near it, confirming to a degree Schegloff's hypothesis of pitch accent placement, although this is also not a categorical characteristic of turn change.

Keywords: Pitch Accents, Sentence Stress, Systemic Functional Linguistics, Conversation Analysis, New/Given Information, Turn-Taking, TCUs, TRPs

1 Introduction

Pitch Accents are phonologically salient syllables, and a ubiquitous feature of natural English conversation. Despite the ubiquitous character of pitch accents, scholars seriously disagree as to where and why pitch accents appear in the English language. Phonology specialists working within the Hallidayan tradition claim that pitch accents appear over new, non-presumed information; that is, the main function of pitch accents in conversation is to highlight more salient, more important, and newer information. Scholars working within the conversation analytic framework, on the other hand, claim that pitch accents can perform a very different function in conversational praxis other

than the information highlighting function. In fact, conversation analysts claim that pitch accents can also project an incipient turn transition relevance place; that is, according to this claim, pitch accents are partially responsible for signaling that the current speaker seeks to cede the floor to the listener.

This study intends to discover which of the two theories better reflects the actual phonological reality of natural English conversation in a very real-world, practical sense. In a natural English conversation, do pitch accents actually highlight information as claimed by the Hallidayan tradition? Or are pitch accents a signal of incipient turn change? Could pitch accents perform both of these functions at the same time? These are the questions that this research seeks to answer.

2 Previous Studies

In this section, the previous studies conducted within the Hallidayan and Schegloffian frameworks of English phonology will be reviewed. First, Halliday's basic ideas concerning the function and behavior of pitch accents will be enumerated in section 2.1. The ideas that eventually coalesced into Schegloff's hypothesis of the behavior of pitch accents will be listed in section 2.2.

2.1 Hallidayan Phonology

Although intonation studies certainly did not start with Halliday, he was probably the first scholar to claim that intonation is more than linguistic decoration; that is, Halliday (1967) is the first scholar to posit that intonation is closely tied to information structure in English. Insisting that intonation is an epiphenomenon closely related to Theme-Rheme structure in English, Halliday hypothesized that pitch-accent—what he calls “tonics”—appear on the stressed syllables of content words that represent new information. A logical extension of this theory is that content words that represent given information are deaccented; in other words, given information, or old information, is not accented a second time in plastic languages like English (Ladd 1980, 2008; Swerts, Krahmer, & Avesani 2002; Vallduvi 1992). Other scholars have studied the implications of this theory, and discovered tentative evidence—“tentative” because all of the research is based on sentential analysis and/or the intuitive analysis of sentences created by the linguist—in support of Halliday's original claim, even if in slightly to highly modified form (Pierrehumbert & Hirschberg 1990; Halliday & Greaves 2008; Chafe 1976, 1980; Polanyi, Van Den Berg, & Ahn 2003; Steedman 2000; Kahnemuyipour 2009). Yet, to be fair, none of the above scholars claim that intonation only performs the function of highlighting new information in plastic languages; indeed, many of the above scholars claim intonation performs several other functions as well.

However, other scholars have tested the New-Given Information hypothesis and found the results lacking. Bard & Aylett (1999) claimed that in their corpus of authentic

dialogues in plastic languages old information is only deaccented 30% of the time. Put in other words, Bard & Aylett discovered that old information appears with pitch accents nearly 70% of the time. This finding would seem to strongly refute the implications of the theory of the New-Given Information & pitch-accent connection. However, while defining new information in discourse is relatively straightforward, defining given information/old information is another metaphorical cup of tea: several scholars have noted that the dividing line between New and Given information is not a trivial and readily transparent border in many cases (Halliday & Greaves 2008). Accordingly, Bard & Aylett's fairly damning study of Halliday's theory and its conclusions should be taken with a grain of salt.

Another fairly serious concern about the New-Given Information & Pitch Accents theory is that most of the scholarship that contends it is a valid description of plastic language phonology is based on simple sentential analysis, if not just the intuitions of the investigator (Schegloff 1998, 2007). Indeed, a more valid study of the theory would analyze dialogues rather than sentences or simple sequences of sentences in order to examine whether pitch accents actually affect later pitch-accent placement.

2.2 Schegloffian Phonology

Although Schegloff would not deny that pitch accents may be related to information structure, he does insist that pitch accents perform another function in natural communication: they cooperate with other linguistic signs to signal incipient turn change. The first scholar to posit that pitch accents may be engaged with turn-yielding signals was Duncan (1972). Duncan (1972) claims that turn-yielding is signaled by one or more of the following cues: 1) any phrase-final intonation other than a sustained pitch, 2) a drawl on the final syllable of the phrase, 3) the termination of a hand gesture of some sort, 4) a tag expression like you know, 5) a drop in pitch or loudness in conjunction with a tag expression, 6) the completion of a grammatical clause. However, his research has been criticized on several grounds, including both of the following: 1) it lacks a formal means to categorize each cue; 2) his data is just subjective impressions of things he witnessed.

The advent of conversation analysis at nearly the same time produced a host of much more methodical research which claimed similar things: Sacks, Schegloff, & Jefferson (1974) insisted that Transition Relevance Places (TRPs), which are locations in dialogue at which speaker transition can occur without a marked aberration in the dialogue, are signaled by syntactic completion points, and that intonation also seems to play a decisive role. Later, Ford & Thompson (1996) examined grammatical completion and intonation along with the correlation of speaker change in natural conversations. Ford & Thompson (1996) defined grammatical completion in terms of syntactic completion; that is, a conversational contribution was grammatically complete at the end of the last argument of the clause, and at the end of each additional clausal

complement. This is independent of intonation. As for intonation, however, they divided intonation into a dichotomy between final intonation (either rising or falling intonation), and non-final intonation (all other types of intonation). They discovered that syntactic completion points operate together with final intonation as salient turn-yielding cues. In fact, they discovered that almost all intonationally complete utterances are also syntactically complete (98.8%), but only half of the syntactically complete utterances are intonationally complete (53.6%). That is, syntax and intonation seem to cooperate in signaling turn change.

Wennerstrom & Siegal (2003) found similar results. Based on the ToBI system, Wennerstrom & Siegal (2003) divided phrase-final intonation much further than Ford & Thompson's simple dichotomy between final and non-final intonation. They posit six different phrase-final categories: high rise (H-H%), low (L-L%), plateau (H-L%), low-rise (L-H%), partial fall (L-L%), and no boundary. They found that high rise intonation strongly correlates to turn finality and thus turn yielding (67%), followed by low (40%), although it is impossible to claim on the basis of the results that either high-rise intonation or low intonation categorically entails turn change. The other four types all strongly correlated to turn holds or a lack of speaker change. This demonstrates the important role of intonation in discourse turn-taking structure, and is congruent with the results of many other studies (Szczepek Reed 2004; French & Local 1986; Ogden 2001; Liddicoat 2004; Cutler & Pearson 1986). Recently, Gravano & Hirschberg (2011) have further validated Wennerstrom & Siegal's results: speaker change correlated to a high rise (H-H%) 22% of the time, and to partial fall (L-L%) 47% of the time, although again it is important to remember that neither intonation categorically impels turn change. Although they found a reverse proportion of high rise and partial fall intonations, both still formed the majority of the intonations present at speaker changes. Furthermore, like Ford & Thompson (1996), Gravano & Hirschberg (2011) found that intonational completion coincides with syntactic completion at speaker change with high frequency: 82% of the time.

Although no serious scholar denies that intonation is related in some way to turn taking in dialogues, the role of pitch accents in turn taking is much less clear. Schegloff (1987, 1998), Wells & Macfarlane (1998), and Fox (2001) posit that pitch accents, which Schegloff defines as "pitch and volume prominences" and thus demonstrates that he makes no serious distinction between changes of pitch or volume, serve as turn-yielding signals in conversation; that is, pitch-accents are highly interrelated to "projection", a phenomenon in which interlocutors monitor the contributions of other interlocutors in real-time in order to unconsciously predict where the next possible TRP will appear, and begin their own speaking turn. Schegloff, Wells & Macfarlane, and Fox provide some qualitative evidence for the idea that interlocutors monitor current utterances for the presence of pitch accents as a signal of imminent syntactic completion, which in turn leads to the onset of a TRP. In a word, although high-rise and falling turn-final

intonation seem to correlate with turn change, pitch accents also seem to play a role in how interlocutors determine where TRPs appear in dialogues.

3 Data & Methodology

In this section, the data and research methodology will be explained. In section 3.1, the digital recording used as data will be characterized. In section 3.2, the way in which utterances were coded will be enumerated. In section 3.3, the way in which either the predictions made by the Hallidayan theory or the Schegloffian theory are determined to be closer the actual phonological praxis of the data will be stipulated.

3.1 The Data

A single dialogue between two native speakers of English, one a native speaker of New Zealand English and one a native speaker of British English, was recorded on a digital camera in early October 2011. When the recording began, one speaker (“Speaker S” in the transcripts and examples) was sitting down at a table, and waiting for the second speaker to appear. The second speaker (“Speaker C” in the transcripts and examples) had not yet entered the room. After a ten-minute wait, the second speaker appeared, and the conversation began. Although the recording lasts over eighteen minutes, with ten-minutes of relative silence as speaker “S” sits by himself at the table and only eight minutes of actual conversation between speaker “S” and speaker “C”, only the first three minutes of the conversation is considered in this study. The reasons for only using the first three minutes of the conversation as the data set are theoretical and practical: theoretical in the sense that the first three minutes contains the first three minutes that the two speakers actually exchanged information, so it is easier to determine what is new or given within the dialogue; practical in the sense that examining more than three minutes becomes extremely cumbersome.

3.2 Coding Utterances

All utterances in the three minutes of dialogue used as data in this research were coded in four different ways: the location of pitch accents, the location of new information, the location of syntactic completion points, and the location of intonational completion points. The criterion under which any of these locations is deduced is explained below in each sub-section.

3.2.1 Determining Pitch Accent Locations

Although there are many terms for pitch accent—such as sentence stress, prominence, and nuclear accent—in the literature, this study uses the term pitch accent. In this study, a pitch accent is defined as either the one syllable with the greatest relative step-up or step-down within the utterance, such that the relative pitch change

of the syllable is greater than the relative pitch change of any other syllable in the utterance, or as a prominence of increased decibel volume; that is, this study uses Schegloff's definition of pitch accent, which stipulates that pitch accents can be either prominent in pitch or volume. Accordingly, this definition is slightly wider than many other definitions of pitch accent (Wennerstrom & Siegal 2003; Ladd 2008; Halliday & Greaves 2008). This study believes this definition is warranted because there is some solid evidence that in actual conversational praxis, interlocutors do not make a hard and fast distinction between pitch and volume (Szczepek Reed 2006, 2011).

However, the human auditory system is the product of evolutionary processes, not an audio engineer. Relying on human judgments of the position of relatively prominent pitch accents alone can be problematic. Accordingly, the positions of pitch accents were verified with PRAAT software. PRAAT software allows visual access to the actual phonological reality of any utterance. In the transcript and examples, pitch accent syllables are coded with bold letters (i.e., they are written in bold letters).

3.2.2 Determining New/Given Information Locations

The status of any lexical item as new or given was determined semantically; that is, the first time any content word (cf. Selkirk 1984) that represented any notion or a concept appeared for the first time in the digital recording, that content word was marked as new information. This is, of course, a strict definition that is slightly at variance with Halliday's notion of "new information." Indeed, Halliday's notion of "new" also includes the idea of "unrecoverable information" (Halliday & Greaves 2008). "Unrecoverable" is a slightly more nebulous concept: any idea that the speaker believes would not be instantly recalled by interlocutors can also appear with a pitch accent even if it has already appeared once in a dialogue.

However, the inclusion of the concept of "unrecoverable" within the definition of "new" renders the possibility of clearly delineating new information from "given" information nearly opaque. In order to nullify this possibility, this study uses a strict definition of new information: content words that first appear in the dialogue are marked as new information; content words that appear in the dialogue a second or subsequent time are marked as given information. However, an exception is made for content words, especially adjectives, that are used in a new sense or used to describe something new to the discourse. Semantically new information in the transcripts and examples are underlined (i.e., they are underlined).

3.2.3 Determining Locations of Syntactic and Phonological Completion

Syntactic completion is determined by the verb and the arguments of the verb of the syntactically highest clause in a sentence, although successive complements are also determined to be points of syntactic completion. That is, utterances with transitive verbs are not marked as syntactically complete until the second argument appears.

Verbs that can be both transitive and intransitive are marked as intransitive verbs after the verb, and then again if an object noun or object noun phrase appears. The last content word in an argument within an utterance is coded as a syntactic completion point. Any complements to the verb after the last argument (added information become the verbal arguments) are also coded as syntactic completion points. Syntactic completion in the transcript and examples is coded after the completion point with double forward slashes (i.e., points of syntactic completion are marked with double forward slashes// and further lexical phrasal or clausal additions are also// marked// with forward slashes/).

Phonological completion is determined by the presence of a low-fall or high-rise (Wennerstrom & Siegal 2003; Gravano & Hirschberg 2011). Level pitch, slight rises, and slight falls at the end of a syntactically complete unit are not coded as phonologically complete. Accordingly, this study only recognizes six types of utterance final intonation: high-rise, slight-rise, level, slight-fall, low-fall, and no boundary, which is defined as the lack of a perceptible boundary). As Wennestrom & Siegal (2003), Gravano & Hirschberg (2011) have shown, while syntactic completion can nominate an utterance as a TRP, phonological completion seconds the nomination and strengthens the salience of the TRP. However, it does need to be pointed out that low-fall and high-rise are not the only utterance final intonation patterns that lead to a TRP, although it is fair to say that they are overwhelmingly more common than any other. All instances of utterance final low-fall intonation and high-rise intonation are coded as phonological completion points. In the transcript and the examples, utterance final intonation is coded differently for each of the five types of utterance final intonation: high-rises are coded with a question mark (?); slight rises are coded with a comma (,); level pitch is coded with a dash (-); slight-falls are coded with a semicolon (;); low-falls are coded with a period (.); when an utterance has no perceptible boundary, no marks appear at all. It is important to remember that the question marks and the periods that appear in the transcripts and examples neither indicate sentential completion (period) nor interrogative mood (question marks); rather, both indicate intonational activity. Lastly, the intonation will be coded only at points of syntactic completion (i.e., is intonation marked// everywhere?// intonation is not marked// everywhere.// it is only marked at points,// of syntactic completion./).

3.3 Determining Theoretic Validity

Both the Hallidayan theory of phonology and the Schegloffian hypothesis make testable and falsifiable predictions. That is, both theories stipulate that pitch accents serve a function. The Hallidayan theory predicts that pitch accents are integrated into how speakers conceive of the information status of what they are saying; therefore the Hallidayan theory predicts that the position of pitch accents will correlate to content words that represent new information. The Schegloffian hypothesis, on the other hand,

predicts that pitch accents are signals of incipient turn change; therefore, the Schegloffian hypothesis predicts that pitch accents will appear on or near turn transitions and high-rise and low-fall utterance final intonation. We examine under what conditions either theory could be proven correct in more detail below.

Although Halliday's theory actually claims that pitch accents will appear on either the last content word that represents new information in a single tone group (unmarked placement) or any other word if motivated for a special reason (marked placement), this study goes easy on Halliday because tone groups are not considered in any determination of theoretic validity. If the predictions made by the Hallidayan theory which concern pitch accents are correct, then:

1. A pitch accent will appear on the content words that represent new information.
2. Pitch accents will not appear on content words that represent previously mentioned information.
3. Pitch accents can appear any word if motivated for a special reason (i.e., contrastive stress or emphatic stress, and others).

If the predictions made by the Schegloffian hypothesis that pitch accents act as signals of incipient turn change are correct, then:

1. A pitch accent signals an upcoming possible transition relevance place (TRP) at the next point of syntactic completion of the utterance currently being produced, which will be followed by turn change and the beginning of the interlocutor's turn.
2. A pitch accent that is followed by a point of syntactic completion but not intended to be a TRP will be "blocked" somehow by other TRP obfuscating features (i.e., rush-throughs, listing words like "first" and "second", or other signals that indicate the current speaker requests a longer turn).
3. The lack of a pitch accent before a point of syntactic completion in the conversation will not be a point of syntactic completion that is treated by the interlocutor as a TRP.

Although correlation and collocation are not the same phenomenon as causation, this study will take correlation and collocation as evidence of either theory. Collocation of pitch accents with content words that represent new information will be taken as proof of the validity of Halliday's theory. Collocation or proximate collocation of pitch accents with transition relevance places or actual turn changes will be taken as evidence for Schegloff's hypothesis.

4 Results

The results for both the Hallidayan analysis and the Schegloffian analysis are reported below. First, in section 4.1, the results of the comparison of the Hallidayan

predictions against the actual phonological behavior of the two speakers in the data are enumerated and analyzed. Next, in section 4.2, the results of the comparison of the Schegloffian predictions against the actual phonological behavior of the two speakers in the data are described in a series of exemplary sequences.

4.1 Hallidayan Predictions and Phonological Reality

One very interesting facet of the data is that Halliday's theory of unmarked pitch-accent placement works extremely well at the beginning of the conversation. In the first four lines of the dialogue, pitch accents appear exactly where Halliday predicts they will appear. In the example below, the pitch accents all appear on the last content word in the tone group.

Example 1:

- 1: S: Hello?// We're on://
 2: C: We're starting// right away?//
 3: S: Yeah It's on// now://
 4: C: Alright.

As can be seen in example 1, the last content word in each utterance that represents new information has a pitch accent. In the expression "we're on", the "on" actually represents phrasal verb particle, not a preposition, so this is in fact a valid example of a content word because the expression "we're on" is a clause that means something close to "we started." Furthermore, the "alright" that appears in line 4 does not have a pitch accent, but the "alright" is a discourse marker, and many scholars have claimed that one of the characteristics of discourse markers is that they resist pitch accent placement (Schiffrin 1987). Some scholars even claim that a central feature of discourse markers is that they are no longer content words (Fischer 2006). Accordingly, it is not surprising that no pitch accent appears on "alright," and this is not counterevidence against Halliday's central claim.

Other examples that validate Halliday's claims permeate the data. Indeed, content words that represent new information in the dialogue often regularly appear with a pitch accent. The examples below all demonstrate this behavior.

Example 2

- 11: S: Hn I said to im like that's ridiculous://
 12: C: (Laughs)
 13: S: But he's got money// there// so:-

Example 3

- 25: C: So how you doing?//
 26: S: Alright.

Example 4

- 37: S: (1.0) Some of them look good:// I don't (0.5) this looks a bit easy//
 though://

38: S: It's just reading a newspaper //(is that **too** easy-// for ouyou?//)

Example 5

29: S: (1.8) um:: the songs::// [in the class?//

30: C: [the music. alright.

31: S: I'm gonna try,// and do it// for ouyou class// which which one's the best song,// for them?//

In example 2, Speaker S's utterance in line 11 contains two tone groups (Halliday divides any utterance with two pitch accents into two tone groups, regardless of the lack of a perceptible intonation boundary), and the last content words that represent new information in both tone groups contain pitch accents. Furthermore, Speaker S's utterance in line 13 also contains a pitch accent on the last content word that represents new information. The "there" is a deictic adverb and a content word, but as many scholars have shown, it does not often take a pitch accent in English. Example 3 contains a pitch accent on the last content word (the present progressive form of the verb "do") in the tone group. Example 4 contains a series of pitch accents on the last content words that represent new information. The second time the adjective "easy" appears in the dialogue, it is deaccented. The reason that "ouyou" does not have a pitch accent in line 38 is because it is given information by that point in the conversation, and is thus deaccented. Example 5 is a much more complicated case, but it is important to note that in line 29, "songs" has a pitch accent, but in line 31, "songs" has been deaccented and the pitch accent appears on the immediately prior content word.

However, there are some marked placements of pitch accents in the data that need to be removed from any determination of the validity of Halliday's theory. This is because Halliday's theory allows for marked placements of pitch accents if they are motivated for special reasons. In all of the following examples, the pitch accents do not appear on the word predicted by Halliday's theory, but all of them are motivated by what can be considered to be "special reasons."

Example 6

5: S: (1.0) Alright you gotta sit,// **there**.//

Deictic words like "there" are technically content words, but are problematic for Halliday's theory because they often lack a pitch accent. However, a visual inspection of the interaction during this utterance reveals why the pitch accent is on the deictic word at the end of the utterance: speaker S combines his utterances with kinesthetic movements that match the semantic content of "there." Speaker S points to the chair on which speaker C is supposed to sit.

The pitch accent on "there" in example 6 is the product of simultaneous kinesthetic deictic pointing and a pitch accent to match that intent. The special motivation for this placement of the pitch accent in example 6 is the intent to match the kinesthetic deictic to the most saliently relevant word in the utterance.

Another example of marked placement of pitch accents will illustrate other



instances of pitch accents that do not conform to Halliday's theory—at least at first sight. In example 7 below, speaker C's utterance contains three pitch accents, but two of the pitch accents are essentially the same word.

Example 7

88: C: so **it's** well; picture one or picture two tells the story// of the song.//

89: S: uh huh uh huh

The phonological behavior of example 7 is easily explained. The pitch accents are contrastive stresses. The purpose of contrastive stress is not to highlight information. Rather, it is to highlight the comparison at hand. This example again demonstrates that conversation participants can deviate from Halliday's default pitch accent placement in certain situations.

However, there are problems with Halliday's theory and the predictions it makes—if there were no problems it would not be a theory anymore. Not all of the marked pitch accents placements in the data can be explained away under the excuse of "special reason." In the following examples, it is difficult to ascertain why the speakers placed pitch accents on words that are highly unexpected from the standpoint of the predictions made by Halliday's theory.

Example 8

59: S: [And they write// with penci:ls// then do they?//

60: C: [h

61: C: Yeah they can write// with **pencil**// and (0.5) you can do a front and back copy//

62: (0.5)

63: S: Oka[y.

Example 9

5: S: (1.0) Alright you gotta sit// **there**://

6: C: I gotta sit// **there**://

Example 10

- 50: C: [An I] get them to **guess**.//
 51: (1.0)
 52: S: Oh// you get them to **guess**// that=//[()] (early onset)
 53: C: =[initially]//]

Example 11

- 69: C: they listen to the **song**// and then they put the **right** answers in//(RT)
 70: C: and see if any of their guesses are=
 71: S: =**correct**// [or not.//
 72: C: [**correct**.]//

Example 8 begins as a classic Hallidayan example: the pitch accent in line 59 is the last content word that represents new information. However, after that, the phonological behavior deviates from Hallidayan predictions. The next utterance in line 61 has a pitch accent on exactly the same content word even though it is obviously given information at this point. Example 9 contains a very similar example of repeating a previously pitch accented word. Examples 10 and 11 both contain near repetitions of the previous utterance that are near copies of the previous utterance down to the phonetic level. It is very difficult to reconcile these examples with Hallidayan theory. Of course, Halliday could just claim that speaker C was “specially motivated” to put a pitch accent on given information, but it is unclear as to why repeating a previous statement along with the previous statement’s intonation pattern is specially motivated. Indeed, the above examples seem to indicate the behavior of pitch accent placements when there is no new information in an utterance at all!

Overall, the predictions made by the Hallidayan theory are mostly borne out in the data, although by no means perfectly. There are 128 pitch accents in the data. After the special cases of marked pitch accent placement due to kinesthetic deictic words or contrastive stress are removed from consideration, the total number of pitch accents in the data is 121. The amount of pitch accents that are placed on a content word that represents new information in the dialogue is 71. However, nearly 44 pitch accents appear on content words that represent old information, and another 6 appear on structure words. Overall, this indicates that most of the time pitch accents really do seem to highlight new information; that is, fully 55% of the pitch accents in the data collocated with content words that represented new information in the dialogue. However, 34% of the pitch accents were collocated with content words that represented given information in the dialogue. This finding corroborates the research of Bard & Aylett (1999). It seems fair to conclude that Halliday’s theory is fairly valid, although there seem to be a sizable minority of cases in which the actual praxis of conversational prosody deviates from the predictions made by the theory.

4.2 Schegloffian Predictions and Phonological Reality

Schegloff's hypothesis states that pitch accents are related to the presence of a TRP, a place at which turn change occurs. Although almost all turn change is accomplished at a point of syntactic completion, not all points of syntactic completion result in turn change. In other words, syntactic completion is not enough by itself to entail turn change. Something else coordinates with points of syntactic completion to signal incipient or immediate turn change. Schegloff hypothesizes that pitch accents are the signal that indicates whether a point of syntactic completion is also a TRP or not. If that is true, then the presence of pitch accents near a syntactic completion point should correlate with the presence of TRPs. Actually, a sizable portion of the data that indicates that pitch accents are indeed near, or even sometimes collocated with points of syntactic completion that resulted in turn change. In example 12 below, pitch accents located at points of syntactic completion correspond exactly to the location of TRPs.

Example 12

- 1: S: Hello?// We're on.//
 2: C: We're starting// right away?//
 3: S: Yeah It's on// now.//
 4: C: Alright.
 5: S: (1.0) Alright you gotta sit// there.//
 6: C: I gotta sit// there.//

In example 12, both speaker S and C complete utterances with a pitch accent at a point of syntactic completion that result in turn change in lines 1, 2, 3, and 5. Line 4, however, does not contain a pitch accent, and there is a one second period of silence after it, which indicates that the next speaker did not interpret the "alright" in line 4 as a turn change signal. But in line 5, after the appearance of another pitch accent, turn change immediately ensues.

Furthermore, many other cases of turn change at a point of syntactic completion with a pitch accent pepper the data. Indeed, pitch accents do seem to correlate to turn change in many cases throughout the data. All of the following examples illustrate this tendency.

Example 13

- 25: C: So how you doing?//
 26: S: Alright.

Example 14

- 107: C: it's written.//
 108: S: right.

Example 15

- 56: C: They initially guess,// and then they put them they write answers.//
 57: S: Oh okay.

In all of the examples above, a pitch accent is located on the last argument of a syntactic clause, followed by either high-rise (?) or a low-fall intonation (.). In all cases,

the next speaker begins to respond immediately after the utterance without any salient pausing before the next utterance, which indicates that the next speaker was sensitive to the signals in the previous utterance that indicated incipient turn transition.

However, not all cases are so clear cut; indeed, the majority of turn changes in the data are much more complex, but still nonetheless provide evidence for the hypothesis that pitch accents on or near points of syntactic completion signal incipient turn change. For instance, in a number of cases a pitch accent without syntactic completion is not treated as a TRP. This would indicate that neither the presence of either a pitch accent nor a point of syntactic completion are enough to result in turn change: both have to be present in order to do so. The examples below demonstrate this.

Example 16

11: S: Hn I **said** to im like that's ridiculous./

12: C: (Laughs)

Example 17

122: C: Ya listen to the song?//

123: S: I've **heard** the song// but a long long time ago./

In example 16 above, the verb “said” has an audible pitch accent on it, but speaker C does not begin her response immediately after the appearance of the verb “said” in the dialogue. The verb “said” strongly projects a following unit of grammar, either a word or another entire clause, which simultaneously indicates that the speaker has not reached a point of syntactic completion. Indeed, speaker C waits until after speaker S puts a pitch accent on the last word of the embedded clause before she begins her response, which in this case is simple laughter. In example 17, the pitch accent is on the verb “listen”, but turn change does not occur until after the object preposition phrase. This may be because the verb “listen”, although it can be intransitive, seems to project more to come like a transitive verb, and thus does not collocate with a point of syntactic completion. Indeed, speaker S does not begin his retort until after speaker C produces the object phrase with a high-rise intonation. In a word, both of these examples seem to indicate that pitch accents by themselves are not enough to entail turn change. They have to appear with or near a point of syntactic completion.

The reverse is also true: points of syntactic completion by themselves are also not enough to entail turn change. Indeed, cases in which the lack of a pitch accent seem to override the interpretation of syntactic completion points as a possible TPR can be found in the data, which could explain the preponderance of points of syntactic completion which did not result in a turn change.

Example 18

35: S: Do you follow the activities// like it's **written** here?//

36: C: Um:: I think I've done all the activities.//

Example 19

109: C: so it's always written// in the **picture**./

110: S: ahhnhh:::

In both of the examples above, portions of the utterances comprise a point of syntactic completion that is not treated by the interlocutor as a point at which to begin to respond. In example 18, “do you follow the activities” by itself is syntactically complete, but the next speaker does not begin to respond after “activities.” Actually, the next speaker waits until after the pitch accent appears in the complement clause after the main clause. Something similar happens in line 109 of example 19: “so it’s always written” is syntactically complete, but it does not have a pitch accent. The next speaker does not react to it as if they should respond after “so it’s always written.” Indeed, the speaker does not begin to respond until after the pitch accent in the complement preposition phrase. In essence, both of these examples seem to indicate that points of syntactic completion by themselves are not enough to entail turn change. They have to appear with or near a pitch accent.

The examples above seem to indicate that pitch accents seem to cooperate with points of syntactic completion to signal the intent to initiate turn change. However, this is not a categorical characteristic. If pitch accents are in any way actually related to signaling turn change, they are weakly connected. There is also evidence in the data that seems to indicate that the participants do not always treat pitch-accent near or on points of syntactic completion as turn change signals. For instance, in example 20 below, lines 13 and 14 have pitch accents, but there is no turn change.

Example 20

9: S: We’re getting money// as **well**-//

10: C: We can hear it.//

11: S: Hn I **said** to im like that’s ridiculous.//

12: C: (Laugh)

13: S: But he’s got money// there// so:-

14: S: We’re getting **paid**// tuh talk.//

15: (4.0)

16: C: Have we got instructions?//

17: (0.5)

18: S: No::: um he just said that we’re looking at u::m he’s **looking** at intonation.//

Although the neither of the utterances in line 13 and 14 precede a immediate turn change, the lack of turn change after lines 13 and 14 can be explained in conversation analytic terms: the utterances in line 13 and 14 are in 3rd position. 3rd position utterances are responses after another response. The trait that makes these utterances different from 1st position utterances, which are utterances that obligate a response of some sort, and 2nd position utterances, which are utterances that provide responses to 1st position utterances, is that they are not treated by the interlocutor as a 1st position utterance; that is, the interlocutor does not react to them as if they obligated a response.

Indeed, Speaker C does not respond to the utterances in line 13 and 14 at all, and indeed, for all intents and purposes, seems to ignore them. That is, this example shows that interlocutors do not respond to everything a speaker says, and can freely choose to ignore certain things; obligating a response is not the same as necessitating a response. This example does not show that pitch accents are unrelated to turn change. It simply shows that speakers do not feel that everything said is worth a retort.

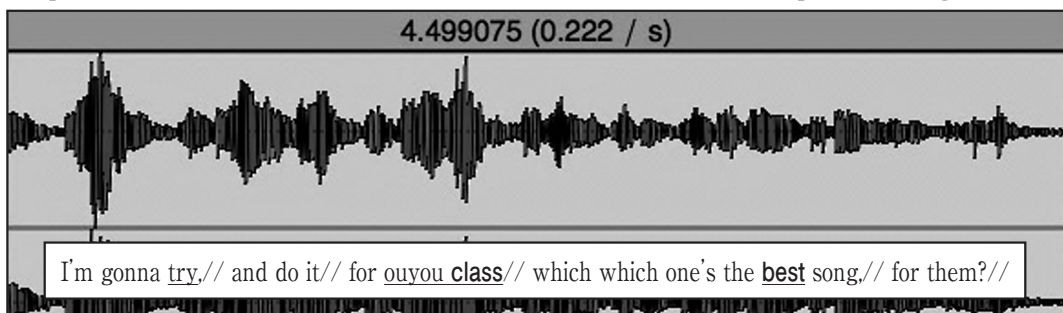
Pitch accents on or near points of syntactic completion seem to strongly correlate to turn change, but there are many examples in the data of pitch accents on or near points of syntactic completion that do not entail turn change at all. These cases are much more problematic for Schegloff's hypothesis, and require a more nuanced explanation. The following example illustrates the issue: Speaker S's utterance has two pitch accents scattered across a declarative clause and an interrogative clause; however, only the 2nd pitch-accent collocates with turn change.

Example 21

31: S: I'm gonna try// and do it// for ouyou class// which which one's the best song// for them?//

32: C: Um::: Tom's diner's quite good.//

In the above example, speaker S's turn is composed of five separate syntactic completion points, but two of them have pitch accents. If Schegloff's hypothesis is correct, then the pitch accent on "class," which also corresponds to a point of syntactic completion, should adumbrate the intent to initiate turn change. However, that is certainly not borne out in the data: no turn change occurs until after the interrogative clause is complete. One way to account for this discrepancy between the hypothesis and the data is to posit that speaker S as strategically occluded any turn change signal the previous pitch accent may be emitting; that is, speaker S may be preventing the pitch accent at the point of syntactic completion from signaling incipient turn change. This is exactly what speaker S seems to be doing. In fact, speaker S performs a rush-though (Schegloff 2007), which obfuscates the boundary between the two utterances, and prevents an interlocutor from taking advantage of the potential TRP. In layman's terms, speaker S speaks fast at the point of transition from the declarative clause and the interrogative clause. The waveform (the decibel readout, not the intonation readout) of speaker S's utterance in line 31 indicates that Simon never stops vocalizing between



the utterances. There is absolutely no gap for an interlocutor to begin a response.

This example shows that speaker S occluded the boundary between his statement and his question in order to prevent speaker C from interpreting the end of the statement as a TRP! In a word, as Halliday and Greaves rightly state, sometimes “there are no clear boundaries between tone units in connected speech” (2008 p58), but the above example, and many like it, demonstrate that speakers purposefully obfuscate the boundaries between tone units to prevent turn change.

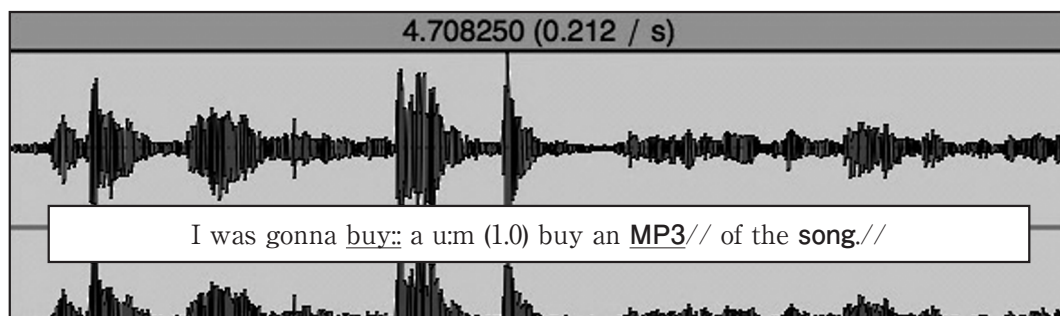
The above example demonstrated that a speaker can obfuscate the intonation boundary between two clauses to prevent turn change from happening, but the same phenomenon can happen within a single clause as well. In the following example, Speaker S produces two pitch accents on two separate syntactic completion points, but speaker C does not initiate her turn until after the second pitch accent. The first pitch accented point of syntactic completion does not seem to signal to speaker C that speaker S is ceding the turn or ending his conversational contribution. The second pitch accent, however, elicits a reaction.

Example 22

126: S: I was gonna buy: a u:m (1.0) buy an MP3// of the song://

127: C: yeah it's easier to use// than the tape://

As in example 21, speaker S seems to obfuscate the intonation boundary between the argument of the verb and the prepositional phrase after the verb with a rush-through. The waveform on the PRAAT readout shows that Simon never stopped vocalizing for any length of time, which occludes the distinction between tone groups.



What the previous two examples demonstrate is that the turn change signaling function of pitch accents on or near syntactic completion points can be strategically obfuscated in order to forestall an interlocutor from interpreting a pitch accent on or near a point of syntactic completion as a TRP.

Although pitch accents on or near points of syntactic completion seem to foreshadow turn change unless obfuscated or curtailed in some manner, there are some utterances with pitch accents on or near points of syntactic completion that did not result in any turn change. How can this discrepancy be accounted for? In the following extract, speaker S produces a number of questions, many of which have pitch accents,

but speaker C does not respond to any of them until there is a slight pause, after which speaker C seems to take as her cue to begin speaking.

Example 23

75: S: And what else do you do// with that// what do you do// after that// whats another one//

76: S: **Do** you like (0.3) [do this// here//

77: C: [there's this thing// this is very easy//

Although speaker S produces a number of questions with pitch accents, speaker C does not act on any of them as signals of the imminent onset of TRPs. This seems to be a case which disproves Schegloff's hypothesis, but a visual inspection of the interaction during the utterances in lines 75-55 reveals why speaker C did not respond to any of the questions present in line 75 and 76: speaker C did not know the answer. Speaker C's facial contortions reveal that she did not know how to answer speaker S's serial questioning. Speaker S's questions with TRP signaling pitch accents near or on points of syntactic completion may very well have functioned as designed, but no response would be forthcoming if there is no response to give.



The above example demonstrates that cognitive reality trumps the effect of phonological turn change signals. That is, a question presumes an answer, but when there is no ready answer to a question, no phonological turn change signal can induce a nonexistent response.

Another example demonstrates how the turn change signaling effect of pitch accents on or near syntactic completion points can be nullified by the context. In the example below, a number of pitch accents appear near or on points of syntactic completion in speaker C's long utterance, but speaker S does not take any of them as a TRP. In fact, speaker S is silent throughout the one-sided exchange.

Example 24

80: C: They have to spot the differences// they can **do** that// but then

they have to be able tuh explain the part// about what the differences are// in English./

81: S: U::m is this before the lesson// again?=//

Although speaker C litters her utterance with four pitch accents, two of which are near points of syntactic completion and another two of which are at points of syntactic completion, and even deploys a low-fall intonation at the first point of syntactic completion, speaker S does not initiate turn change until after the appearance of the pitch accented word “English” with a low-fall intonation at the end. This may seem to be contrary to Schegloff’s claims, but a quick visual inspection of this spate of the interaction reveals why speaker S was not interacting: he was not even looking at speaker C, one of the prerequisites of conversation, and seems to be in an existential funk—speaker S is intently staring at the lesson plan in front of him.



The above example indicates that the turn change signaling function of the pitch accents on or near points of syntactic completion can be quickly neutralized by contextual factors, as well as cognitive factors. Pitch accents on or near points of syntactic completion signal the intent to initiate turn change, but other unrelated reasons can prevent turn change from occurring very easily.

Pitch accents do seem to be correlated with signals of turn change, but not all pitch accents are alike in this regard. In fact, certain pitch accents do not behave as turn change signals: contrastive pitch accents. None of the contrastive pitch accents present in the data adumbrate turn change. For instance, in the example below, neither pitch accent in speaker C’s utterance results in turn change to speaker S. Indeed, no turn change takes place until after the low-fall intonation at the end of the utterance.

Example 25

92: C: and they hafta see:: if it’s picture one// or picture two// that actually follows the storyline// of the song.//

93: S: How is that different// there?//

This example demonstrates that certain pitch accents are partially geared toward cooperation with other signals to manifest the intent to change speaking turns, and that other kinds of pitch accents are not. This finding is consistent with recent research that suggests that interlocutors perceive contrastive pitch accents differently than other pitch accents (Katz & Selkirk 2011). Indeed, the speakers in the data certainly seem to distinguish between the two.

To repeat, the presence of a pitch accent near a point of syntactic completion that is not neutralized by phonetic, cognitive, or contextual factors often correlates with turn change. As mentioned previously, almost all turn change occurs at points of syntactic completion: 87 of the 91 instances of turn change occur at points of syntactic completion; only four examples of turn change occur at points of syntactic non-completion. But even these four exceptions seem to orient to the signaling effect of pitch accents. That is, the mistiming of the turn change in these four exceptions seems to be the result of the interlocutor's orientation to the pitch accent as a signal of the intent to change turns, even though the speaker did not intend to actually cede the right to speak.

Example 26

- 95: S: She's she's carrying an umbrella// and a bag//
 95: C: Yup that's [different.//]
 96: S: [Is that the only] is that the only is there more than one//
 [sometimes?//
 97: C: [there's more// than one difference// yup// there's a few
differences// in each one.//

Example 27

- 113: S: Is that the only difference// that they need to spot// or that [they,
 114: C: [no not
really there's different ones// like one's written in newspaper
 about; (1.0) [hermaphrodites]// and this is about; something// else//

In example 26, the first overlap, or simultaneous talk, occurs in line 95 and 96. However, the overlap occurs right after the pitch accent in line 95. That is, the interruption did not occur just anywhere: it began exactly after the pitch accent. There is another overlap at the end of line 96 and the beginning of line 97 that occurs under similar circumstances: the overlap begins immediately after the pitch accent. It is worth mentioning that the turn change did not happen here as a result of the high-rise intonation at the end of the utterance in line 96. Rather, it seems to be the result of the pitch accent. Example 27 contains a similar example in which speaker C seems to interpret the pitch accent as permission to begin her turn, and she does in the middle of speaker S's turn. Both of these examples demonstrate how interlocutors can interpret pitch accents that are placed well before the point of syntactic completion that was intended to demarcate the actual terminus of the utterance. In a word, these examples seem to indicate that pitch accents placed well before a point of syntactic completion

can cause an interlocutor to misinterpret when the speaker intends to initiate turn change.

However, there are some examples that directly contradict the predictions made by Schegloff's hypothesis. Turn change can be accomplished without the resort to pitch accents at all. All of the following examples include discourse markers, which almost categorically never take pitch accents.

Example 28

- 107: C: it's written//
 108: S: right.
 109: C: so it's always written// in the picture//
 110: S: ahhnhh:::[]

Example 29

- 59: S: [And they write// with penci:ls// then do they?//
 60: C: [h
 61: C: Yeah they can write// with pencil// and (0.5) you can do a front and back copy//
 62: (0.5)
 63: S: Oka[y.
 64: C: [and they guess// and do the other
 65: C: then they can work with a partner// to come up with a guess//

In both example 28 and 29, a discourse marker followed by low-fall intonation accomplishes turn change. In line 108 of example 28, a single "right" said with low-fall intonation is enough to entail turn change. In line 63, of example 29, a single "okay" said with low-fall intonation is sufficient to lead to turn change. In many other cases, "continuers" like "yeah", "uh huh", which seem to serve as markers that appear at TRPs that were passed over, also accomplish turn change in the data (Schegloff 1982; Gravano & Hirschberg 2011). However, contrary to the predictions made by Schegloff's theory, no pitch accents are present at all. Therefore, in order that Schegloff's theory is not completely invalidated, it must be amended: discourse markers and continuers appearing with high-rise or low-fall intonation are sufficient to cause turn change on their own, and therefore discourse markers and continuers are removed from calculations of theoretic validity.

In conclusion, the presence of a pitch accent near a point of syntactic completion, which necessarily assumes a unit syntactically much higher than a discourse marker, that is not blocked by phonetic, cognitive, or contextual factors often correlates to turn change. But specifically how often does a pitch accent near a point of syntactic completion that is not blocked by other factors actually correlate to turn change? The data contains 176 points of syntactic completion, but there are only 92 turn changes. Turn changes that occurred at points of syntactic non-completion are removed from any calculation of theoretic validity. There were four of these. Furthermore, turn

changes at accomplished little more than the production of a continuer are also removed from the calculation as well. There were eighteen of these. All turn changes that are the result of discourse markers are also removed from the calculation because discourse markers do not meet the criterion of syntactically complete. There were six of these. In total, after the removal of turn changes at points that were not syntactically complete (4), turn changes the result of continuers (18), and discourse markers (6), we need to account for 64 turn changes in the data. They all occurred at points of syntactic completion, but how many of them are also near a pitch accent? The answer is that 35 of these turn changes at points of syntactic completion collocate with a pitch accent on or slightly before the turn change. That is, more than half of the non-trivial turn changes (55%) in the three minutes of dialogue in the data set occur at points of syntactic completion with a pitch accent on the point of syntactic completion or slightly before it. In a word, Schegloff's hypothesis is borne out in the data, but it is not a categorical feature either.

5 Discussion

The results of this study seem to indicate that both Halliday's theory and Schegloff's hypothesis are both valid to some degree. Halliday's theory, which predicts that pitch accents will appear on new information, is borne out by the data to a large degree. The keyword is "degree" though. Although it can be said that pitch accents strongly collocate with new information in the dialogue, this is not even close to a categorical trait: only a little more than half of the pitch accents in the dialogue correspond to content words that unambiguously represent new information. There is a salient tendency for pitch accents to also appear on given information, especially if one speaker repeated the previous utterance. Nearly all repeats were more than just syntactic copies: entire intonation contours and pitch accents were imitated as well.

The predictions made by Schegloff's hypothesis are corroborated by much of the data, but there could always be another way to explain the turn change. For instance, in example 10, the turn change could be explained by the presence of the turn final intonation rather than the pitch accent on the last word in the utterance. In a word, Schegloff's hypothesis is too porous: it allows for the existence of examples which seem to support its predictions without disentangling the other factors that may contribute to the phenomenon it intends to explicate.

Of course, this discussion needs to end with an important disclaimer: all the evidence for this study was based on one single instance of recorded English conversation, and only the first three minutes of the conversation at that; therefore, the conclusions of this study are tenuous at best, and are tentative until further research confirms the basic conclusion.

6 Conclusion

The actual praxis of pitch accent placement in natural conversation seems to indicate that both Halliday and Schegloff were right to some degree. Pitch accents do collocate to content words that represent new information more than half the time. Similarly, turn change occurred at points of syntactic completion with pitch accents on or near the point of syntactic completion more than half of the time. Neither result is a ringing endorsement of either theory, but at the very least, it shows that both theories represent more than at least a grain of truth.

7 Transcripts

The transcription follows the Jeffersonian transcription conventions utilized by conversation analysts.

7.1 Transcription Conventions

Transcript conventions used to mark pitch accents, points of syntactic completion, intonation at points of syntactic completion, and information status (New-Given) are described in section 3.2. Other transcript conventions are adopted from Schegloff (2007).

7.2 Transcript

- 1: S: Hello?// We're on./
- 2: C: We're starting// right away?//
- 3: S: Yeah It's on// now./
- 4: C: Alright.
- 5: S: (1.0) Alright you gotta sit./ there./
- 6: C: I gotta sit// there./
- 7: S: [(he got this)]//
- 8: C: [()]
- 9: S: We're getting money// as well.-//
- 10: C: We can hear it./
- 11: S: Hn I said to im like that's ridiculous./
- 12: C: (Laughs)
- 13: S: But he's got money// there// so:-
- 14: S: We're getting paid// tuh talk./
- 15: (4.0)
- 16: C: Have we got instructions?//
- 17: (0.5)
- 18: S: No:: um he just said that we're looking at u::m he's looking at intonation./

- 19: (3.0)
- 20: S: So apart from that there's nothing-//
- 21: C: There's no instructions.// [George]
- 22: S: You've gotta sit// there// You're not allowed to be in the room-//
- 23: C: alright.
- 24: S: You've gotta sit,// there::// and talk// to me-//
- 25: C: So how you doing?//
- 26: S: Alright.
- 27: (5.0)
- 28: S: But um:: yeah I did I was gonna do that.// (1.1) remember that//
stuff// you gave me// about (Speaker C is looking at the board)
- 29: S: (1.8) um:: the songs::// [in the class?// (early onset)
- 30: C: [the music. alright.
- 31: S: I'm gonna try,// and do it// for ouyou class// which which one's
the best song,// for them?//(RT)
- 32: C: Um::: Tom's diner's quite good.//
- 33: (3.0)
- 34: C: Um do it// in liddle bits.//
- 35: S: Do you follow the activities// like it's written here?//
- 36: C: Um::: I think I've done all the activities.//
- 37: S: (1.0) Some of them look good:// I don't (0.5) this looks a bit easy//
though.//
- 38: S: It's just reading a newspaper//((is that too easy-// for ouyou?//))(RT)
- 39: C: (2.0) That is a bit easy// I think I made it a bit more difficult//(RT)
- 40: C: I don't remember what I did// though.//(RT)
- 41: (1.0)
- 42: S: You've obviously lots you can do:-//
- 43: S: You can do you can do the gap fill,// in there.//
- 44: C: (2.0) I think I may have done a gap fi::ll,//
- 45: (1.0)
- 46: S: So do that// one// with the gap fill// this one// here::// I've done
that//(RT)
- 47: C: right right I've done that// yup I'm taking out a line//
- 48: (0.5)
- 49: S: [So::]
- 50: C: [An I] get them to guess.//
- 51: (1.0)
- 52: S: Oh you get them to guess// that=//[()] (early onset)
- 53: C: =[initially.]
- 54: S: yeah.

- 55: (1.0)
 56: C: They initially guess, // and then they put them they write **answers**. //
 57: S: Oh okay.
 58: (0.1)
 59: S: [And they write // with pencils // then do they? //
 60: C: [h
 61: C: Yeah they can write // with **pencil** // and (0.5) you can do a front and back **copy** //
 62: (0.5)
 63: S: Oka[y.
 64: C: [and **they** guess // and do the other
 65: C: then they can **work** with a partner // to come up with a guess. //
 66: S: Okay that's a **good** idea. //
 67: S: and **then** so okay they guess // **first**. // and then;
 68: S: (2.0) they::: <<listen to the song>> //
 69: C: they listen to the **song** // and then they put the **right** answers in // (RT)
 70: C: and see if any of their guesses are=
 71: S: =correct [or not.
 72: C: [correct.
 73: S: an then they check // on the back. //
 74: C: You can do it // there's a **check**. (RT)
 75: S: And what else do you do // with that // what do you do // after that // what's another one //
 76: S: **Do** you like (0.3) [do this // **here**? // (RTx3)
 77: C: [there's this // thing. // this is **very** easy. //
 78: S: Right okay yeah right.
 79: (4.0)
 80: C: They have to **spot** the differences. // they can **do** that // but then they have to be able tuh explain the **part** // about what the differences are // in **English**. //
 81: S: U:::m is this before the lesson // again?= //
 82: C: =before the lesson.
 83: S: This is supposed to be like [Tom's diner // kind of-
 84: C: [before the other lesson.
 85: S: this gets does this get does this have anything to do with the song // itself? //
 86: C: well this tells the **story** // of the song. //
 87: S: it does // tell it. // okay.
 88: C: so **it's** well; picture one or picture two tells the story // of the song. // (contrastive)

- 89: S: uh huh uh huh
- 90: C: so first of all you get em to **spot** the differences// and then **explain** the differences-// (0.5) tuh each other.// and then they **listen** to the song.//
- 91: S: Yup
- 92: C: and they hafta see:: if it's **picture** one// or **picture** two// that actually follows the storyline// of the song//
- 93: S: How is that **different**// there?//
- 94: C: u::m
- 95: S: She's she's carrying an umbrella.// and a bag.//
- 95: C: Yup **that's** [different.//]
- 96: S: [Is that the only] **is** that the only is there more than **one**// [sometimes?//
- 97: C: [there's more// than **one** difference// yup there's a few **differences**// in each one.//
- 98: S: Okay so that would mean that I'm sitting// in the morning// and diner on the corner
(2.0) (No eye contact)
- 99: S: Well, that's (4.0) (<when you gonna count on for the man to **crawl** the>)
- 100: (2.0)
- 101: S: So (6.0) what's the **diff**- what's **that** about?=// (early onset)
- 102: C: =well it's gotta you've **got** to go down further// so-[()
- 103: S: [oh okay so (10.0) okay.
- 104: (2.0)
- 105: C: You can always tell// which one// [(2.0) follows the songs// in the **story**// (RT)
- 106: S: [hm,
- 107: C: it's written.//
- 108: S: right.
- 109: C: so it's always written// in the **picture**.//
- 110: S: ahnhhh:::[
- 111: C: [that's the **one**::// that
- 112: S: (laughs)
- 113: S: Is that the only difference// that they need to **spot**// or that [they, (early onset)
- 114: C: [no
not really there's different ones// like one's written in newspaper about::t, (1.0) [hermaphrodites]/ and this is about; something// else//

- (RT)
- 115: S: [()]
- 116: C: so you know in the song it says um:, there's a story// about an actor.//
- 117: S: yeah
- 118: C: So they've gotta be able to pick the () (<they **spot** the differences **first**>)// so it helps em;//
- 119: S: Righ::t;=
- 120: C: =pick up the key words// that they they need// to:[
- 121: S: [hearing
there **song**;
- 122: C: Ya listen to the song?// (baseline)
- 123: S: I've heard the song// but a long long time ago.// (RT)
- 124: (2.0)
- 125: S: But u::m (1.0) yeah I didn't actually listen to the tape.// (no eye contact)
- 126: S: I was gonna buy:: a u:m (1.0) buy an **MP3**// of the **song**.// (RT) (baseline example)
- 127: C: yeah it's easier to use// than the **tape**.// (RT)
- 128: S: yeah.
- 129: C: don't hafta go **forward** and **back**.//
- 130: S: yeah but I've gotta **do** that// and then I've gotta find something// that can actually **play** **MP3s**.// can you you can link up your computer to the u::m [() the room]// (RT)(early onset)
- 131: C: [the projector yeah]
- 132: S: The room doesn't have a **projector**// though//

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