"Getting past *no*"

Sequence, action and sound production in the projection of *no*-initiated turns*

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Projection of turn trajectories is fundamental to participants' management of turn-taking, with the timing of overlaps and silences enacting distinct social meanings. Working with American English data, this study examines *no* in response to polar questions, instances where the token *no* could constitute a complete turn. Attending closely to the mutually elaborating details of action and sound, we uncover sequence- and action-specific patterns in the use of differing prosodic and phonetic features. Our data reveal the simultaneous operation of sequence-based turn projection and more local articulations of sound, as participants orient to sequence-specific norms for turn construction. We conclude with a discussion of the implications of our findings for a functional theory of grammar that interrelates grammar, sound production and the co-construction of interactional sequences.

1. Introduction

The goal of the current paper is to report on an examination of projection – based on resources of sound production, lexico-grammar, and sequential context – in a set of turn-types in American English conversation. These turn-types all begin with the negative particle *no*, and in some cases that negative particle constitutes the complete turn. We find that although turns initiated with *no* may be expanded into multi-unit turns, there is not a clear one-to-one alignment of projection resources such that the production of *no* in expanded turns is characteristically of one particular phonetic shape. Instead, we find that the projection of further talk past *no* is produced in a variety of ways, related to sequential environment, speaker's role in that emerging environment, sound production features, and/or responses by recipients of a *no* turn.

Our project is part of a continuing research program refining the framework for turn-taking first proposed by Sacks et al. (1974). The research outlined here is motivated in part by an empirical interest in the concept of "projection" discussed in the Sacks et al. paper. The trajectory of a turn in progress[1] is projectable through a number of resources in talk-in-interaction, including a combination of gesture, gaze, syntax, and ongoing action (Schegloff 1979; Goodwin 1981; Ford et al. 1996; Selting 2000). This idea of "projection," that participants in talk-in-interaction monitor turns-in-progress to the degree that possible completion points or transition relevance spaces are anticipated, is supported by research on precision timing in turn-taking (Jefferson 1973, 1984), collaborative construction of utterances (Lerner 1991), as well as research on various types of "prefaces" and "preliminaries" (Terasaki 1976; Jefferson 1978; Schegloff 1980; Streeck 1995).

One of the areas in which the original 1974 model of turn-taking has been further clarified is the domain of lexical items, like *oh*, *no* and *okay*, which by themselves could constitute complete turns, but which can also serve as the beginnings of longer (multi-unit) turns (Schegloff 1996). One of the research questions raised by these lexical items relates precisely to turn projection: For any particular use of such an item, how can the recipient know if the item is being produced as a complete turn, or if it is being done in such a way that it projects more to come (e.g., through its intonation contour or perhaps because it does not form a separate contour at all but is produced as part of a single phrase – continuous with what follows)? Local (1996), for example, explores the phonetic differences between tokens of *oh* which are complete turns and tokens of *oh* which preface longer turns. He finds that the phonetic design of *oh* on any particular occasion serves as a resource for hearing whether the item projects more to come or not. Ford (2002b) offers similar initial observations regarding stand-alone *okay* and tokens of *okay* which begin longer turns.

In the present study, recognizing that action, grammar and sound production work simultaneously, we consider the real time unfolding sound production features of *no*, in combination with the location in specific sequential contexts. We examine how speakers use these simultaneously unfolding resources to produce turns which consist entirely of the word *no* (what we will call stand-alone *no* turns) and turns where there is talk produced past *no*, that is, "*no*-plus" turns.

Ford (2001, 2002a) drew our attention to some of the turn projection issues raised by the regular composition of rejecting, denying or disagreeing *no* responses. The most interesting issue raised at that time was how turns embodying denial or disagreement and begun with *no*, which does not lexico-grammatically project beyond the particle itself, regularly do not stop at *no*: rather, such turns overwhelmingly involve the speaker continuing past *no*. Examples (1)–(3) below illustrate the common pattern.

(1)

```
   B:  Do you ever wonder if you're an alie[n?
   J:                                       [professional
       sm- [schmoozers.
   T:      [ ( )
       (0.9)
→  J:  No:, I don't wonder if I'm an alien,
       I wonder if aliens are controlling me.
```

(2)

```
   B:  Have you been tuh::. New Orleans? Ever?=
→  P:  =No::,=I've never been to New Orleans:.=
       >I've never been to the sou:- Well: tha:t's
       not true::.
```

(3)

```
   K:  Is he Pierre Turgeon's brother?
       (0.5)
→  D:  No I d- they're not related.
```

If *no* does not project beyond itself lexico-grammatically, then how do speakers regularly speak past *no*? On the face of it, there is no obvious sound production pattern that establishes that a *no* will stand alone or lead into continuation; on what identifiable bases are such projections arrived at?

One answer is that denying or disagreeing *no*-answers embody dispreferred actions, and dispreferred actions are regularly followed by accounts, elaborations and so on. And indeed, Ford found that the actions following *no* were often accounts, corrections, and elaborations, just as we would expect for a dispreferred turn. Ford concluded that *no*, in specific sequential environments, projected further talk by the same speaker, a space for offering an account, correction, or other elaboration.

However, we do find instances of disagreeing and denying *no*-responses in which *no* is produced as stand-alone turn, not followed by further talk from the same participant. Consider example (4) below:

(4) Alan telling about party plans

```
Alan:   Weh- well, we're gunnuh bob fer a:pples,
        (0.3)
Karen:      O:h okay
Alan:               [inna trash can,
        (0.2)
Karen:  Mkay yer gonna clean it out I h(h)ope(h)hh,
Al:     Well (h)yeah I'm gonna p- line it with a plastic
        liner.
Karen:  Oh. Okay.
Al:     And um (.) (y'en wuh) we'll have pumpki-=(I)/
        (right) -I'm- Hopefully the bank will be-
→       has the bank put out pumpkins yet?
        (0.4)
→ Karen: No:,
Al:     .hh I wz hoping they'd have 'm out by Friday
```

In response to Alan's question at the first arrow, Karen produces *no* without further talk. Karen's *no* negates and denies what has been formulated as affirmative in Alan's question, but she does not provide an account or correction after her *no*. On this particular occasion, then, in spite of what has been observed to be an oriented-to and normative pattern of further talk after disagreeing or denying *no*, this speaker produces a stand-alone *no* to embody such an action, without further elaboration. By what mechanism(s) might Karen's turn be hearable, as it is being produced, as a case of the negative particle working as a complete turn in itself? In the present study, we were seeking an account of how, on each particular occasion, recipients might have the resources to project whether or not a particular *no* will be followed by further talk in the same turn. It is this question with which we start the exploration reported on here.

As we pursued this question, we found that *no* responses, which shared the feature of constituting a rejection or denial of a claim in the preceding turn, revealed a complex constellation of potential turn projection resources that we feel has not been adequately explored in the literature on turn projection. In our exploration we observed that sequential location, participant roles, and the sound production properties of the particle *no* all work together to project, or decline to project, more to come. In this chapter we present our observations-so-far and suggest how our findings support a view of turn projection as interpretable based on complex interactions among emergent and manipulable facets of context and sound production practices.

2. Data and methodology

2.1 The collection

The methodology for this project follows Schegloff's (1996) suggestion for the investigation of turn construction:

> [one] basic task of analysis ... is to examine the succession of TCU's that occur in turns and ask whether or not such examination reveals recurrent, oriented to, and interactionally consequential constructional types – what we might come to formulate as recognizable turn types. (1996:64)

As a contribution to addressing that question and as part of an empirical account of turn and action projection, we focus on *no*-initiated turns.

In order to place some control on the sequential environments of the turns we inspected, we looked only at instances of *no* tokens presenting disagreement, rejection or denial with respect to an immediately preceding turn. Ford's earlier work included *no* turns as well as turns composed of longer phrases or clauses doing denial (e.g., *We don't know these people*); however, in order to limit the phonetic material that could be manipulated to produce projection, and thus to support comparability across cases, we limited the present collection to *no* tokens and did not include negative or denying phrases or clauses.

Our method was to generously collect cases of denying or disagreeing *no* tokens but to constrain the sequential environments in which they occurred. *No*-initiated turns occur in a wide range of sequential environments (as noted in Ford 2001), and we narrowed the scope of our study to *no*-initiated turns after *yes/no* questions to allow us to explore the role of sound production in these turns (as it turned out, there was a great deal more complexity and diversity even in this constrained sequential environment than we had predicted, as we discuss below). We limited our collection to *no*-initiated turns following *yes/no* questions, broadly understood.

The variety of syntactic formats for these questions include interrogatives with subject-auxiliary inversion, declarative word order with rising intonation, single lexical items or phrases with rising intonation, declarative utterances with tag question words or phrases at their ends, and declarative utterances with falling intonation that represent B-event statements, e.g. *So you're a Norveegian girl* (Labov & Fanshel 1977; Heritage & Roth 1995). By including B-event statements, we diverged from Raymond's study of grammar and the shaping of responses to *yes/no* questions (2000, 2003). This follows from differences in our goals: Raymond's study focused on *yes/no* responses and

their alternatives ("type-conforming" and "type-non-conforming" responses), whereas our study focused on sequential and phonetic aspects of *no* turns which might support or potentially block the projection of further talk.

By collecting only disagreeing, rejecting or denying *no* responses, we also excluded instances in which a *no*-initiated turn agreed with its question, as in (5) below:

(5) *no* doing agreement

```
Terry:   We don't know these people.
         (.)
Terry:   >or< these people.
Rachel:  You d↑on't?
→ Terry: No.
```

Finally, unlike Ford's earlier studies of *no* turns, in our study we made a particular effort to find cases of stand-alone *no*. The proportion of tokens of each type of turn in the present collection should not be taken as representative of patterns of frequency; in fact, stand-alone *no*s are difficult to find.

In line with the interactional linguistic aim of constructing categories and distinctions grounded in the orientations of interactants (Couper-Kuhlen & Selting 2001:2), we were cautious about adopting taken-for-granted or traditional distinctions, even those from use-based grammars. For example, standard use-based grammars of English make reference to a distinction between "conducive" *yes-no* questions and those with "neutral polarity" (e.g., Quirk et al. 1985:808–814; Biber et al. 1999:1113–1116); however, we found this distinction problematic. The conducive vs. neutral distinction proposes that some *yes-no* questions are analyzed as "anticipating", "expecting" or being "biased" toward a particular polarity. For example, "Did someone call you last night?" is interpreted as conducive, indicating that the "speaker is predisposed to the kind of answer he has wanted or expected" (Quirk et al. 1985:808); in this case a positive response is said to be expected, as encoded in the use of the assertive *someone* rather than the non-assertive *anyone*. Negative questions, by this account, are always interpreted as conducive, although whether they are biased toward positive or negative responses is complicated by the presence of assertive or non-assertive items (negative: *yet*, *either*; positive: *still*, *already*).

The fundamental problem with the conducive vs. neutral distinction, given a conversation analysis influenced approach, is that the distinction is based on intuitive judgments of what might be "expected" or "anticipated" rather than on empirical study of the orientations of participants and the specific features of their responses in real-time interactions (as opposed to introspective or retrospective judgments). As our aim is explore relationships between grammatical categories and interactional patterns, we cannot adopt a distinction derived from introspectively interpreted expectations. Thus, while an exploration of the empirical basis for the conducive vs. neutral distinction would certainly be interesting in itself, it is not our aim here. We can report, however, that to the extent that we could form a hypothesis regarding stand-alone vs. *no*-plus turns based on the conducive/neutral distinction, it did not account for turn construction in our data.[2]

2.2 Attending to sound production features

Our aim was to uncover sound production features and patterns which might contribute to the projectability of stand-alone *no* turns and *no*-plus turns. Indeed, there is a continuum of degrees to which *no* tokens in our collection are produced as either standing alone as intonation units or in some way, or bundle of ways, melded to or anticipating same-speaker talk which follows. For each *no* turn in the collection, we inspected the sound production characteristics of *no* and of any further material following it in the turn. For measurements of pitch range and height, we also attended to sound production characteristics of the surrounding talk, both before and after the turn in question.

In analyzing sound production, in addition to relying on our auditory interpretations (cf. Schuetze-Coburn et al. 1991; Couper-Kuhlen 1993), we made extensive use of *Praat* (© Paul Boersma & David Weenink 1992–2002), a computer program designed for acoustic analysis. We attended to duration, pitch movement, pitch height, loudness, intensity, formant movement, and pitch range of speaker and recipient.[3] The details of measuring and reporting sound production features are as follows:

1. Duration: The duration of the entire *no* token (reported in milliseconds) from onset of the nasal to end of vowel resonance.
2. Pitch movement: The degree and shape of the movement of pitch over the course of the *no* token.
3. Pitch height and range: Pitch ranges for each speaker were determined by measuring highest and lowest pitches of the speaker in a 5-minute span of talk. Pitch height refers to the fundamental frequency of the pitch accent of the *no* token in relation to a particular speaker's pitch range (cf. Couper-Kuhlen 1996; Hellermann 2003).
4. Loudness: We use the term 'loudness' rather than amplitude because this feature was determined based on the researchers' auditory judgments.

5. Intensity: We refer to "intensity" or "energy" as it is exhibited in the acoustic wave form and distributed across the duration of *no* tokens.
6. Formant transition: We looked for evidence of F1 and F2 formant transition of the vowel in *no* tokens to a following segment.

Our collection included instances of *no*-plus turns in which *no* was through-produced with the rest of the turn – that is, there was no intonation break between *no* and the rest of the turn – as well as instances in which *no* was produced as a separate intonation unit from the rest of the turn. Examples (6)–(7) illustrate these patterns:

(6)

J: No it works.

(7) (from (1))

J: No:, I don't wonder if I'm an alien,
I wonder if aliens are controlling me.

In (6), J produces *No it works* as a single intonational unit; in (7), on the other hand, J produces *No* in a separate intonation unit from the rest of the turn (*I don't wonder if I'm an alien*). We included both such types in order to determine if phonetic factors other than intonation phrasing could play a role in turn projection. And, in fact, our findings suggest that factors such as pitch range, loudness and direction of pitch movement can work to project past the end of an intonational phrase boundary and suggest "still more to come."

The process of collecting cases and refining our focus led us to observe that the production of *no* turns is best understood with attention to a larger sequential frame than the immediate question-answer pair. We therefore reviewed our cases, inspecting not just the question-answer pair, but also the larger activity in which the pair occurred. We discovered that projection is not just a product of the *no* token's denial of the question it follows. *No* tokens address the relevancies of the particular sequence – not just relevancies of the questions they follow but what the question was itself doing in the sequential context. For example, we found that in understanding the sequential context for *no* turns, it was important to distinguish the local interactional status of the questioner and the recipient of the question. The status of "primary speaker" or "recipient" (Jefferson 1978; Houtkoop & Mazeland 1985) turn out in some sequential environments to be implicated in whether *no* projects more to come or not.

In addition, we found that specific types of sequential context and participant roles for which a non-minimal response is preferred, such as after a topic proffer, were sites in which specific and distinct phonetic resources and alternations came into play in displaying whether a *no* token projected more to come or not. That is, the sound production features that appear in stand-alone *no*s and *no*-plus turns after topic proffers were distinct from the sound features used in *no* responses to preliminary questions, questions that follow projected tellings or the like (Schegloff 1980). The relevance of larger sequential context to the potential sound features that may distinguish one turn trajectory from another underscores the methodological necessity of attending to all aspects of the unfolding co-constructed flow of talk. The relevance of sequence type to the use of specific sound productions and specific turn types also points to the reality of sequence-specific phonetic and grammatical systems (see Section 5 below). Thus, our method included close attention to the different facets of *no* turns based both on activity context and on characteristics of sound production.

In this project we have uncovered patterns of sound production that coincide with the particular interactional work done by the *no* token; our study thus argues for sound production as one interactive resource that works with sequential context and lexical choice in achieving action projection.

Our base collection consists of 25 stand-alone tokens of *no*, and 43 tokens of *no* in *no*-plus turns. The current paper presents detail on 8 stand-alone tokens of *no* and 11 tokens of *no* in *no*-plus turns; we use these instances to illustrate the most suggestive patterns in the collection.

3. Findings

In what follows, we offer some detail on two intriguing patterns in our data that speak to the coordination of sequential location, activity and phonetics in turn projection. The first pattern occurs in the environment of larger interactional projects, with differences in *no* turns in response to questions by a primary speaker versus responses by primary speakers to questions by their recipients. The second pattern occurs in responses to topic proffers.

3.1 *No* responses to questions within larger projected activities

We found four cases of stand-alone *no* and six instances of *no*-plus turns emerging within longer projected activities involving a division of speakership roles: primary speaker vs. recipient (Jefferson 1978; Houtkoop & Mazeland 1985). In these cases our question-response sequences are doing supportive

or subsidiary tasks within such activities as story-tellings, or as parts of preliminaries after a longer telling has been projected. These are not formally insert expansions, as they are not adjacency pairs inserted within adjacency pairs, nor do they necessarily move the main agenda forward, though this is sometimes their function.

One such example is (8), involving preliminaries after the projection of a longer agenda in which Alan is constructed as the primary speaker:

(8) stand-alone *no* responding to a question by primary speaker

```
KAR:  Hello?
ALA:  Karen Baxter?
KAR:  Yea?
ALA:  Yer not busy are yuh?
      (0.3)
KAR:  Well yeah, I a:m.
ALA:  Well this'll be qui:ck, I mean it's nothing
      (.)
ALA:  .t.h[hhh
KAR:      [Keh
→ ALA:  Okay uhm (did-B-didya) Bruce leave
        you a no:te?
→ KAR:  nNo.
ALA:  Oka:y. The party is on fer Saturda:y,
```

Alan, the primary speaker, asks a question of Karen, the locally constructed recipient. In this example, Karen responds with a stand-alone *no*. In fact, in all of our instances like (8) (e.g., (4), above), in which the primary speaker of a larger project asks a question of the recipient, the answer is produced as a stand-alone *no*. In contrast, when it is the recipient of an extended telling that asks the question, the answer is done as a *no*-plus turn. We thus have found a pattern in which the production of *no* responses within longer projected agendas is distinguished by whether the questioner is locally constructed as primary speaker or recipient. This is our first major finding in the present study.

Consider examples (9) and (10) below. In these examples, the recipients of longer turns initiate question-answer sequences, and the primary speakers respond with *no*-plus answers. Consider example (9).

(9) Alarm clock

```
1     J: And he's like, (0.8) he tries to go in and I'm like
2        we're not open yet, and he goes .hh uh I just really
3        need to use your bathroom. ((laugh)) (h)I'm like
4        (0.2) Fine. 'Cause I had like seven minutes and so:
5        much stuff to do:, and there were already like three
6        people:,[ (.).h waiting,outside>Sorry.
         ():      [Mmmmm
7   → T: Is your alarm clock still not working?
8   → J: No it works.
9     T: (Mar mar:.)/ (Ahm huh:.)*
10    J: Mar mar mar? .hh and um
```

*((*the turns at lines 9 and 10 seem to be word play))*

In lines 1–5, J is reporting on her experience that morning opening the coffee shop where she works and about a notoriously strange fellow waiting to get in before the shop opens. At line 7, T displays her understanding of J's being rushed (J's talk in lines 3–4: *I had like seven minutes and so much stuff to do*) by asking about the status of J's alarm clock. T's question is negatively formatted with *still not working* displaying T's prior knowledge of the broken status of J's alarm clock asking, in effect, *is your alarm clock still broken?* J responds to T's question with a *no*-plus turn (line 8). The *no* token of J's response at line 8 acts to answer T's question while the continuation of the turn adds the clause *it works* possibly to be as unambiguous as possible about the valence of the *no* following a negatively formulated question (see Pope 1973).

Example (10) also involves a *no*-plus turn produced by a primary speaker in response to a question from a recipient:

(10) Two guys talking about (ice) hockey

```
1   K: It-they were like-(.) they just swept the first
2      series. Darin they are h(h)ead and shoulders:, (0.2)
3      I think the best team in the N-H-L, but anyway h
4      .hh >a lot of people here< twe don't need the N-H(h)
5      L:, >y'know< I (ch[il)s]↑
→ 6 D:                    [They're the Canadian's farm team,
       ri:ght?
→ 7    (0.3)
  8 K: hh No, they're the Islander's farm team.
  9 D  Why >(was the Canadian's quarter) <Okay go ahead
 10 K: [Anyway,
 11     (0.4) so, (1.2) what I'm getting to here though
 12     is that they're sayin' all this that we don't need
 13     the NHL.
```

In (10), D, the recipient of K's telling, asks a question at line 6. As in (9), the question by the recipient concerns the topic of the current primary speaker's telling; here the question form is a candidate claim, with a tag confirmation

request. K responds to the confirmation request with a rejection of the claim (the token *no*) followed by a correction.

Both (9) and (10) involve a locally constructed primary speaker, in the midst of a telling, being asked a *yes/no* question by a recipient. The primary speaker responds with a *no*-initiated turn. In each case, the recipient of the ongoing telling asks the teller a question addressing details related to the telling. In both instances the primary teller's response to this subsidiary question is a *no*-plus turn. All six of our cases of disagreeing or denying *no*-plus responses within longer tellings are produced by the primary speaker of a larger project after a question from the recipient.

In contrast, all four of our examples of stand-alone *no* in the context of longer projected tellings (like (4) and (8)) are produced by the recipients of the larger projects after a question from the primary speaker. Consider examples (11) and (12) below, which contain question-answer sequences within longer tellings, with the question directed by the primary teller to the recipient:

(11) (same as (4)) Alan telling about party plans

```
1   ALA: [(I-)/(Gi-) weh- well, we're gunnuh bob fer
2        a:pples, (0.3)
3   KAR: O:h okafy
4   ALA:          [inna trash can
5        (0.2)
6   KAR: Mkay yer gonna clean it out I h(h)ope(h)hh
7   ALA: Well (h)yeah I'm gonna p- line it with a plastic
         liner.
8   KAR: Oh. Okay.
9   ALA: And um (.) (y'en wuh) we'll have pumpki-=(I)/
10       (right)- I'm- Hopefully the bank will be-
→ 11     eh:s the bank put out pumpkins yet?
  12     (0.4)
→ 13 KAR: No:,
  14 ALA: .hh I wz hoping they'd have 'm out by Friday.
```

In (11), Alan is telling his plans for a party and working to get Karen's commitment to participate in the planning. At line 9, Alan does not necessarily introduce "pumpkins" as a topic in their own right but rather, the pumpkins are first introduced as an item on the list of party plans, as background that the planning of the party depends on. But in his formulation of the pumpkin item, Alan cuts off and initiates repair three times, ultimately directly enlisting Karen's participation in his formulation in line 11.

Alan introduces the pumpkins as part of the existing plan, but he cuts off, *pumpki-*, at the point of possible completion and just after a pitch peak on the first syllable of word. He rushes into a hesitant and restart-riddled reformulation, incorporating his epistemic stance toward this part of the plan with *hopefully* (line 10) indicating that having pumpkins is not a given but rather a plan contingent on some other action: *the bank* (3rd party impersonal) in lines 10 and 11. But again, in line 10, Alan cuts off a turn in progress to restart and repair – now formulating the question (line 11) to which Karen responds with a stand-alone *no* in line 13.

Looking back just a bit in the talk, the pumpkin question (line 11) is embedded in a list of plans for the party. Following the item of a game of apple bobbing, Alan is introducing another activity for the party, with the question in line 11 not serving as an end in itself, but rather a piece of contingent background necessary for completion of this item in the plan. In two ways the answer to this question is presented as subsidiary to but supportive of the continuation of an in-progress sequence of sharing plans for the party – a sequence involving a primary speaker and a recipient of a longer turn:

1. The item of the party plan is contingent on the availability of the pumpkins so the answer to the question is needed before the larger activity can move ahead.
2. The turn itself seems to be in trouble and incomplete precisely with respect to this item of information. Thus the turn and its initial trajectory has been framed to arrive at another item on the list of plans. When the item is incrementally treated as more and more problematic (the turn itself is produced as incomplete in two places), a question is ultimately produced as a possible completion of the turn, but not as the "item" in the list on the agenda of Alan, the primary speaker. And the answer is done as a stand-alone *no*.

A similar recipient-produced use of a stand-alone *no* is seen in (12). Curt and two friends (Mike and Gary) are sitting at a picnic table talking about cars. Mike has just finished a story about someone he knows who has two old cars with their original bodies; this touches off what turns out to be a story by Curt:

(12)

```
1   Curt: Did you know that guy up there at oh what the
2         hell is his name, used to work up at
3         (Steeldinner) garage, did their body work for
4         'em.
5         (1.5)
```

```
6   Curt:  Uh:::ah, oh:: he meh- uh, his wife ran off with
7          Bill McCann.
8          (3.2)
→ 9   Curt:  You know who I'm talking abou:t,
→ 10  Mike:  No:,
11  Curt:  Oh:: shit. He had. This guy had, a beautiful,
12         thirty-two O:lds.
```

In line 1, Curt's story preface includes the general referent *that guy* and then the beginning of the search for the guy's name. The name search is part of the work done to establish the mutual understanding of a character as background for a possible telling. Curt doesn't get any explicit display of understanding about *that guy* at the body shop (lines 5 and 8); and at line 9, using a B-event statement, he asks Mike if he knows the person whose name is being searched for. Mike's *no* response at line 10 is not followed by an account nor is it followed by any explicit attempt to help in the name search. Curt continues with a telling that is designed for recipients who do not know the person's name (Sacks 1992, v. 2:444: "type 2" identity selection) focusing on the unnamed guy's car. As in (11), here, the recipient's stand-alone *no* response constitutes a subsidiary action during the development of a sequence.

Excerpts (9)–(12) demonstrate the necessity to look beyond the immediate sequential environment of the *yes/no* question-answer adjacency pair in an analysis of the coordination of sound production and action projection in *no* and *no*-plus turns. The larger sequential context, and the roles of participants within it, set up relevance for different actions done either through *no*-plus or a stand-alone *no* turns.

Action and sequential organization alone, even analyzed without particular attention to sound production, then, reveal a basis for projection of stand-alone *no* or *no*-plus turns. When we consider sound production, however, we find that the sound properties of these cases also contribute to the projection of stand-alone *no* or *no*-plus turns in the environment of longer projected tellings. We now turn to a consideration of the sound production of these turns.

Sound production of no*-initiated responses within longer tellings*

In addition to analyzing *no*-initiated turns in their interactional environments and noting the orderly differences related to speaker status in the contexts of ongoing tellings, we looked closely at the sound production of these turns in order to determine whether and how sound production might be at play in the projection of stand-alone *no* verse *no*-plus turns. For our investigation of sound production, we started with auditory analyses by all three researchers. Two of us then did acoustic analyses,[4] both as a check on the auditory analyses and for illustrative purposes.[5] The auditory and acoustic analyses of our collection of *no* turns suggest sound production patterns which are closely related in several ways to the projection work of *no* turns. The patterns for sound production in our collection of *no*-plus turns in longer tellings and produced by the primary speakers were as follows:

1. *no* tokens in these *no*-plus turns tend to be quite short relative to stand-alone *no* tokens – under 220 ms.[6]
2. *no* tokens in these *no*-plus turns are louder than surrounding context.
3. the sound quality of the vowel of *no* in these *no*-plus turns exhibits a change characteristic of what might be seen acoustically as vowel formant transition to the following segment.[7]

All of these features provide for hearing the emerging *no* in these cases as part of a continuing unit, though notably *no*-plus turns in other sequential environments, produced by speakers in different interactional roles, are not always presented in this way.

By contrast, stand-alone *no* tokens, responses offered by recipients to questions by primary tellers in this sequential environment, display the following phonetic characteristics:

1. these stand-alone *no*s are notably longer than tokens of *no* in *no*-plus turns (280–450 ms),
2. these stand-alone *no*s are generally quieter than the talk in the immediate context,
3. the sound quality of the vowels in these stand-alone *no*s does not exhibit a change characteristic of formant transition in the *no*-plus turns (see Note 7).

Table 1 provides measurements for each of our tokens of *no* in contexts of longer tellings. From this table, one can clearly see the differences in duration and loudness between stand-alone *no*s and tokens of *no* in *no*-plus turns. Presence or absence of notable formant transition also appears, at least from preliminary analysis, to distinguish the two types of *no*. Pitch height and direction of pitch movement do not appear to be different for these types of *no*. Table 1 represents our second major finding: stand-alone *no*s and tokens of *no* in *no*-plus turns in the sequential environment of longer tellings are distinguished phonetically through features of duration, loudness, and vowel production.

Let us look more closely at the sound analyses for the *no* tokens from Excerpts (9) and (10), which are *no*-plus turns. The major differences are arrowed.

Table 1. Differences in sound production of *no* in stand-alone and *no*-plus turns within the environment of longer tellings

No type	Duration (ms)	Loudness
Stand-alone *no*s	317	Quieter
	425	Quieter
	272	Quieter
	280	Quieter
No-plus turns	160	Louder
	130	Louder
	200	Louder
	215	Louder
	220	?
	310	Louder

Table 2. Sound production characteristics of the *no* tokens in (9) and (10)

	Excerpt (9)	Excerpt (10)
Pitch contour	slight fall (1.5 ST)	slight fall (0.5 ST)
→ Duration	160 ms	130 ms
Pitch level	mid range	mid range
→ Loudness	louder than immediately prior and following talk	louder than immediately prior and following talk

Table 3. Sound production characteristics of the *no* turns in (11) and (12)

	Excerpt (11)	Excerpt (12)
Pitch contour	slight fall (2.5 ST)	slight fall-rise (2 ST)
→ Duration	425 ms	317 ms
Pitch level	mid range	mid range
→ Loudness	quieter than talk in immediate context	quieter than talk in immediate context

Excerpts (9) and (10) contain examples of *no* plus further talk in which the locally-defined primary speakers respond to recipients. As exemplified by examples (9) and (10), *no* tokens in *no*-plus turns, by speakers in these roles in the activity of a longer telling, tend to be short (160 and 130 milliseconds, respectively), and louder than surrounding talk.

These production features contrast with characteristics of the *no*s in (11) and (12), as listed in Table 3.

The stand-alone tokens of *no* in (11) and (12) are also used within longer projected tellings (stories, plan sharing, direction giving), but they are produced by a participant in the locally defined role of recipient. The producers of these responses are responding to questions asked by the primary teller in an extended telling. In these cases, the *no* tokens are both longer in duration and quieter in volume than the *no* tokens in (9) and (10) and other similar cases.

Summary of differences of no*-initiated turns within larger projects*

In our collection, we find differences in action and sound production between stand-alone *no*s and tokens of *no* in *no*-plus turns within larger projects. With regard to action, stand-alone *no*s occur in answers to questions that are initiated by the primary teller of the larger project; that is, stand-alone *no*s are produced by recipients of longer tellings. In these cases, the questions seek background information that the primary teller elicits in order to move on or to appropriately design the next bit of the telling. *No*-plus turns, on the other hand, are produced in response to questions initiated by the recipient of the larger project; that is, the *no*-plus turns are produced by the primary teller of the longer telling. In these cases, the questions seek clarification of or pursue details about what has been told so far. So stand-alone *no* turns within longer tellings, in our data, are responses by recipients (of longer tellings) to questions by primary speakers who are seeking information that sets the stage for the next bit of telling, while *no*-plus turns in this activity environment are responses by primary speakers to questions by recipients who are seeking clarification or elaboration related to what they have been told so far.

With regard to sound production, we have noted some intriguing differences between stand-alone and *no*-plus tokens of *no* in our small collection. Stand-alone tokens of *no* in this sequential environment are longer[8] and quieter than tokens of *no* in *no*-plus turns. These observations are in line with the findings of Couper-Kuhlen (2001) on high onset and turn projection.

We now turn to an examination of *no*-initiated turns in the second sequential environment: topic proffers.

3.2 *No*-initiated turns after topic proffering questions

In this section we examine denying or disagreeing *no* turns which are responses to questions that simultaneously proffer topics; that is, the initiating turn not only acts as a question but also proposes a topic for further talk, which the recipient may or may not take up. This sequential environment differs from the ones considered in Section 3.1 in that the question-answer pairs discussed in Section 3.1 are embedded within projected and on-going tellings.

The questions and responses we examine in the present section do not have this embedded quality.

The notion of topic proffer is discussed at length in Schegloff (1995). Schegloff describes topic proffers as follows:

> With a topic proffer (ordinarily after the just prior talk has been brought to possible sequence closure), a speaker *proposes* a particular topic (as compared to a solicitation, in which the speaker invites the *recipient* to propose a topic), but does not actively launch or further develop the proposed topic (as in a unilateral topic initiation). By "proffering" the topic, the speaker makes it available to recipient(s) to embrace or reject, to "buy into" or decline.
> (1995:180–181)

Topic proffers have two features which are important to our discussion of no-initiated turns. First, they are commonly designed to proffer "recipient topics" (Schegloff 1995:181):

> The topic may concern something which is specifically, differentially, or even exclusively within the recipient's experience, or on which their view has special weight or authority. In that regard, the projected topic-talking sequence, if it does in fact develop from the proffer, will be one in which the recipient is likely to carry the burden of the talking – either because they are the only ones who could do so, or because they are the ones who *properly* do so. (1995:173)

Second, because they are built to initiate engagement in extended talk on a given topic, a minimal response to a topic proffer is dispreferred (see Schegloff 1995). Thus, a turn which may be aligning with regard to polarity may nonetheless be done as a minimal turn and thereby be heard as not taking up the proffered topic. As this type of response does not take up the topic, it is dispreferred with respect to the total action of the question turn. An example of an agreeing *yes* response that nonetheless declines to pursue the proffered topic can be seen in (13) below:

(13)

```
1      Nancy:  Didja a'ready get the mail,=
2   →  Hyla:   =.hhhh Yes, hh-hh-h[h,
3      Nancy:                    [Oh, hhhmhhh[hh
4      Hyla:                                [hh-hh
5              (.)
6      Nancy:  Sorry I brought it uhhhp
```

In this example, Nancy proffers a topic at line 1, to which Hyla provides a positive and agreeing *yes* response at line 2; Hyla thus agrees with at least one

component of the action done by Nancy's question. In spite of what appears then to be an aligning or affiliating action, it is clear that Hyla's response at line 2 declines to pursue the topic Nancy has proffered – in fact at line 6 Nancy apologizes for having introduced the topic.

Conversely, a *no* response, while rejecting the polarity in the immediately preceding question, can nonetheless take up a topic proffered by the question, and thereby align with the movement toward opening up a sequence. In example (14), a *no*-plus turn presents a negative response but takes up the topic:

(14)

```
      Bee:  Did they get ridda Kuhleznik yet, hhh
   →  Ava:  No: in fact I know somebuddy who ha:s huh [now,
      Bee:                                            [Oh my
           go:d hh[hhh
      Ava:        [Yeh and s' he says y'know he reminds me
           of-eh she reminds me .h of you, meaning me:.
```

Thus, in response to a topic proffer, a *no*-plus turn may be more in alignment with the complete action of a question than a stand-alone *no*, which in essence declines to take up the proffered topic. With this background in mind, let us consider the cases of *no*-initiated turns in the environment of topic proffers.

In our data we found four instances of disagreeing or rejecting *no*-plus responses to topic-proffering questions and three instances of stand-alone *no* answers after topic proffers. We offer two examples from our collection to illustrate these two turn-types in this environment. In these cases, a stand-alone *no* not only disagrees but also declines the topic proffer. In contrast, *no*-plus turns (after affirmatively formatted questions), while denying a claim in the question, may be aligning with the topic through the talk produced after the *no*.

Example (15) below, an expanded presentation of (14), contains a *no*-plus turn, denying the candidate claim but taking up the topic. Note that an earlier sequence has closed, and Bee initiates a new sequence with a topic proffer at line 1. The proffer is not given an animated uptake by Ava at line 3, and at line 4 Bee tries again with a more specific topic-proffering question. This new attempt is taken up by Ava at line 5 with a *no*-plus turn.

(15)

```
1    Bee: Eh-yih have anybuddy: thet uh:? (1.2) I would know
2         from the English department there?
3    Ava: Mm-mh. thc! I don't think so.
```

```
4     Bee:  °Oh,=<Did they get ridda Kuhlęznik yet, hhh
5  →  Ava:  No: in fact I know somebuddy who ha:s huh [now,
6     Bee:                                            [Oh my
7           gg:d hh[hhh
8     Ava:         [reh and s' he says y'know he reminds
9           me of-eh she reminds me .h of you, meaning me:,
```

In the next example, by contrast, a stand-alone *no* response presents disagreement and also declines to take up a topic. Just before the segment in (16) below, Abbie has been telling about her father going to Norway to visit his mother, leaving Abbie's mother alone at home for the upcoming Christmas holidays. Abbie continues this sequence (lines 1–2) and at line 9, Terry initiates a new a topic, the Olympics, touched off by the mention of Norway. At a possible closing point of that sequence, Maureen proffers a topic, again tying to the mention of Norway, and specifically to Abbie's father's trip to Norway (line 21: *So you're a No- Norveegian girl*). Maureen's inference on a subject in Abbie's domain of knowledge works as a *yes/no* question (a B-Event statement) and a topic proffer, selecting Abbie as the next speaker. Abbie responds to Maureen's question and topic proffer with a stand-alone *no* (line 22):

(16)

```
1     Abbie:   So my mom is having to deal with the whole
2              holiday thing all by herself which is kind of
               ((      ).
3     Terry:   [(grea:t)
4     Maureen: Well that's why she's spazzing out.
5     Abbie:   Well no, she would spazz out if he was here
6              too. (.)
7     Abbie:   She just spazzes.
8                 (.)
9     Terry:   Were the Olympics in Norway? Where were they.
10    Abbie:   Yup. Lille[hammer.
11    Maureen:           [They were in Os:lo.
12    Terry:             [(The winter Olympics?) Yeah.
13    Abbie:   Yeah.
14    Maureen: Weren't they?
15             (1.0)
16    Abbie:   Lillehammer
17             (0.2)
18    Abbie:   (I don't know.)
19             (.)
20    Abbie:   North [( )
21 →  Maureen:       [So you're a No- Norveegian gir[l.
```



```
22 →  Abbie:                                          [No.
23             (0.8)
24    Abbie:   [No absolutely not a drop.
25    Maureen: [No-
26    Maureen: No?
27             (.)
28    Abbie:   Nope.
29             (.)
30    Maureen: How's that possible.
31    Maureen: He's not your father.
32    Abbie:   He is my father.
33             (0.4)
34    Abbie:   But they're not Norwegian.
35             (0.7)
36    Terry:   They just live-
37    Abbie:   They just live [(in Oslo).
38    Maureen:                [Oooohh.
39    Terry:   Isn't that different.
```

Even when Abbie produces what could seem to be a *no*-plus turn at line 24, she is merely extending her denial. As discussed elsewhere (Ford 2001, 2002), by withholding an account or correction as a continuation of her *no* response, Abbie initiates a kind of guessing game in which Maureen and Rachel pursue elaboration of the denial, which they ultimately secure.

In the previous sections, we have observed that within longer projected agendas the role of the speakers in the activity and the sound production features of *no* work together in projecting either stand-alone or *no*-plus turns. In those environments, *no*-plus answers are produced by the primary speakers of extended tellings, while stand-alone *no* answers are produced by recipients of extended tellings. In the present section, we have described denying or disagreeing *no* responses to *yes/no* questions that are also topic proffers. While all *no* responses constitute disagreements with affirmatively formatted questions, *no*-plus turns take up a more aligning stance with respect to the action of topic proffering. The stance a recipient takes with respect to a topic proffer is certainly consequential both to the profferer and to the course of the potential development of topic talk. Because one way in which a disagreeing *no* response can still present alignment with the proposed topic is through extension, the projective properties of the unfolding of such turns is relevant both to the interactants and to our current study. Inasmuch as talk beyond *no* in topic proffering sequences does not seem as potentially predictable from the previous context as it is in the cases of question-answer pairs in longer tellings, it is possible that the lack of dependence on speaker status in a sequence places

more weight on the sound production resources for the projection of the unfolding trajectories of *no*-initiated turns. We now turn to sound production to determine if phonetic design may provide evidence for turn projection for *no*-initiated turns after topic proffers.

Sound production of no*-plus turns after topic proffer*

Our close inspection of sound production features for *no*-plus and stand-alone *no* turns in response to topic proffers revealed striking differences. The third major finding of our study, then, concerns the different sound characteristics of *no*-plus turns and stand-alone *no* turns after topic proffers. *No*-plus turns after topic-proffering questions differ from stand-alone *no*s in the same environment most strikingly with regard to where in the speaker's range they occur: tokens of *no* in *no*-plus turns in these cases are produced mid or higher in the speaker's range, while stand-alone *no*s are low and/or bottom in the speaker's range. Consider examples (17) and (18) below:

(17)

```
P: Wo::w. (1.1) Interesting.
   (1.0)
P: a::h I'd like to get to know some other parts of the
   country (1.8)
B: Where else would you like to go::.
   (1.4)
P: tch I: could go: almost anywhere:. (>I m'n<) the only-
   real part- The only part I'm not really too interested
   in naturally is the midwe(h)st.
B: .hhh That all seems like just one big plai:n.=
P: =Ye(h)ah it's just like-h
B: .hh It's like a big squar::e;=
B: =huh [huh
P:      [y'kno:w? To be:: (0.4) traver:s:ed
   (0.6)
M: Mmm
   (0.4)
P: Really.
   (0.6)
P: Bu::t
   (0.9)
P: to[h
→ B:    [Have you been tuh::. New Orleans? Ever?=
→ P: =No::,=I've never been to New Orleans:.=
   >I've never been to the sou:- Well: tha:t's
   not true::.
```


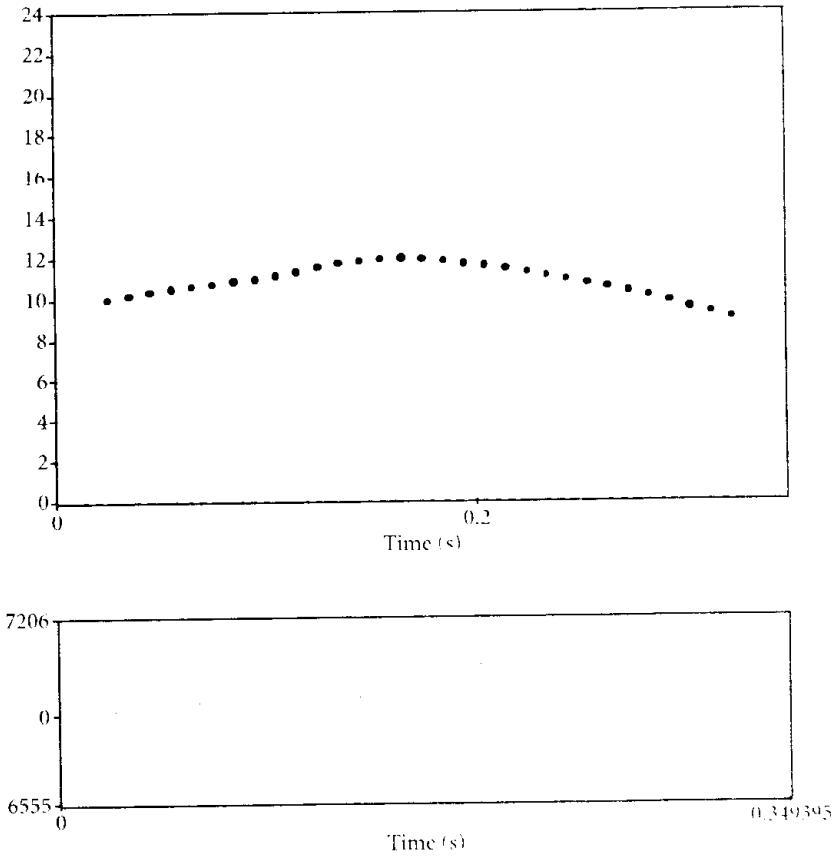

Figure 1. Pitch track and wave form of *no* token from (17)

In this example, P answers the topic-proffering question from B with a *no*-plus turn. This *no* is produced mid in the speaker's range. Figure 1 displays the pitch track for this token of *no*, scaled to speaker's baseline[9] and given in semitones.

In the following stand-alone *no* instance after a topic proffer, in contrast to the sound characteristics for the no-*plus* turn in (18), the *no* is produced in the low and bottom sections of the speaker's range.

(18)

```
A: And the semester is still going of course it ends
   on the twenty-second of July:
   (0.2)
```

B: Mhm
A: So things are busy ha ha h[a
B: [Yea:h
B: Gosh (it's about) another month=
B: =and then Are you coming over to the states at all this summer?
(0.5)
→ A: **No.**
B: No[?
A: [No=
A: =U[m
B: [Not even Chris?:

The *no* in this example is produced starting 7 semitones above the speaker's baseline and falls to the baseline. Figure 2 provides the pitch track of this token of *no*.

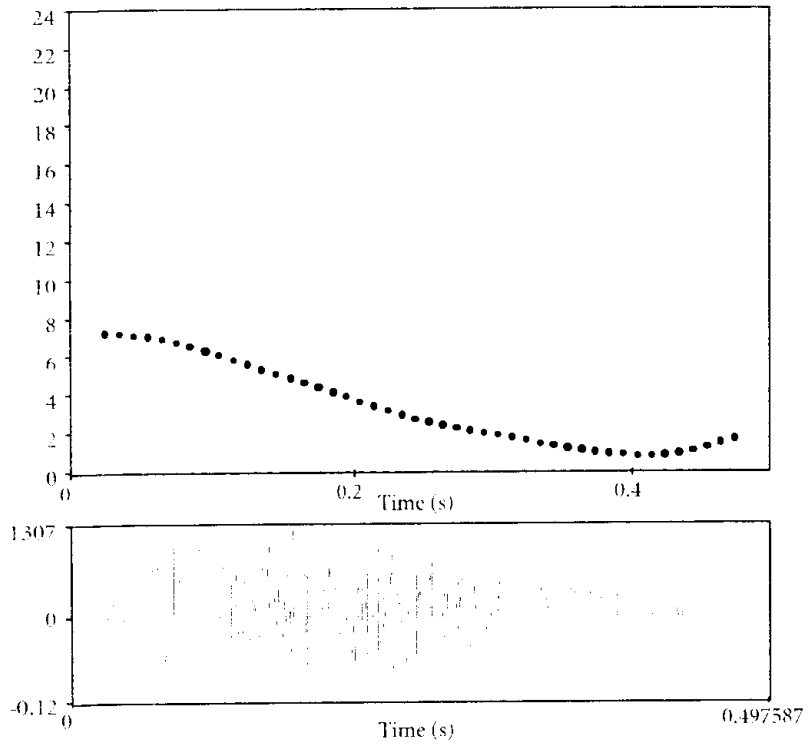

Figure 2. Pitch track and wave form for the stand-alone *no* after topic proffer from (18)

This difference in pitch height between tokens of *no* in *no*-plus turns and stand-alone *no*s after topic proffers may allow recipients to hear from the very beginning of the *no*'s production whether or not the turn is being formulated to continue past *no*. The difference in pitch height is a resource for turn projection.

There is a further interesting difference between tokens of *no* in *no*-plus turns and stand-alone *no*s in topic proffer environments. Although the number of cases is small, it seems that all of the stand-alone *no*s in this environment show a notable decrease in energy through the course of the production of the *no* token, while tokens of *no* in *no*-plus turns show an increase in the energy across the token. We see these changes in energy as a physiological display by current speaker to project, or decline to project, more talk to follow. (A decrease in energy with the falling pitch contour gives the stand-alone *no* tokens what Couper-Kuhlen has called a "concave fall" (1986:92).)

Final pitch movement also appears to distinguish tokens of stand-alone *no* and *no* in *no*-plus turns in this sequential environment. Our tokens of stand-alone *no* after topic proffering questions display a falling pitch contour with either a flattened boundary tone or tail or with a slight turn upward at the end (see Figure 2).[10] While a fall-rise contour in such cases might be used to indicate a speaker's uncertainty about the utterance in its context (Ward & Hirschberg 1992; Wennerstrom 2001) or the speaker's wish to elicit further comment by the previous speaker (Brazil 1997), the lack of audible rise at the end of these contours and the sharp decrease in intensity toward the end of the tokens may indicate that the speaker's *no* is suggesting nothing more than a negative response to the previous speaker's question. The tokens of *no* in *no*-plus turns in topic proffer environment, on the other hand, tend to show a slight rise early in the word and end in a slight fall. Consider the pitch track above, in Figure 1, for the *no* in example (17) (*No::, I've never been to New Orleans:.*). In this example we see a rise of about 2 semitones and then a fall of about 2 semitones.

Stand-alone *no*s after topic proffers thus display the characteristics of being low and/or bottom in the speaker's range, with a notable decrease in energy through the course of the token, and with either a flattened or slightly rising tail after a mainly (though sometimes slight) falling movement. Tokens of *no* in *no*-plus turns after topic proffers, on the other hand, are mid or higher in the speaker's range, and begin with a slight rise and end with a slight fall. There may also be a general difference in duration, but the cases are too few to make that claim with confidence.

Table 4. Summary of phonetic differences in stand-alone *no* and *no*-plus turns after topic proffers

No type	Pitch height	Initial pitch movement	Final pitch movement	Energy distribution
no-plus	Mid or higher	Slight rise	Slight fall	Increasing
Stand-alone *no*	Low and/or bottom	Fall	Flat or slight rise	Decreasing

Summary of differences

Table 4 lists the main differences we have found between tokens of *no* in *no*-plus turns after topic proffer and stand-alone *nos* after topic proffer.

The finding that sound production characteristics of tokens of *no* in *no*-plus turns after topic proffers project in ways that those associated with tokens of *no* in stand-alone turns do not, represents an important contribution to our understanding of the relationship between phonetics and turn projection. Although our tokens of *no* in *no*-plus turns in this sequential environment are produced as separate intonation units from the rest of the turn with a slightly falling final pitch movement, they nonetheless exhibit other phonetic characteristics which may serve to project past the intonation phrase boundary, to indicate "still more to come." While Table 4 shows a different final pitch movement in stand-alone *no* tokens and *no* tokens in *no*-plus turns in the topic proffer environment, we cannot claim, based on patterns in our data, that final pitch direction (falling or not falling) is the primary phonetic characteristic that distinguishes projection of more to come or not. What we do note is that, in the subset of *no*-plus turns which respond to topic proffers, distinctive patterns in the phonetics of pitch height and intensity distribution suggest that these properties may, in certain sequential environments, supercede final pitch movement in turn projection.

We now turn to a comparison of *no*-initiated turns in the two sequential environments.

3.3 Comparing sequential locations

It is clear that both stand-alone *nos* and tokens of *no* in *no*-plus turns exhibit qualities of sound production which vary both within and across sequence types. In this section we will highlight the main phonetic differences we found for each type (stand-alone *no* or *no*-plus tokens) across sequential locations. This section thus reports on our fourth major finding: the phonetic patterns of *no*-initiated turns are sequence-specific.

Stand-alone nos

Between the two sequential environments, after topic proffers or within longer projected agendas, *no* tokens in stand-alone *no* turns vary most noticeably by duration and pitch height. When they occur in sequences embedded within an on-going project, they can be low or mid in the speaker's range. When they occur in topic proffer sequences, on the other hand, they are low and/or bottom in the speaker's pitch range. They also tend to be longer than stand-alone *nos* in embedded sequences: three out of the four stand-alone *nos* in embedded sequences were 300 ms or shorter, while three out of the four stand-alone *nos* in topic proffer sequences were 400 ms or longer. We did not notice consistent differences in loudness for stand-alone *nos* across these two sequential environments. Examples (19) and (20) illustrate the differences.

(19)

```
   ALA:  Karen Baxter?
   KAR:  Yea?
   ALA:  Yer not busy are yuh?
         (0.3)
   KAR:  Well yeah, I a:m.
   ALA:  Well this'll be qui:ck, I mean it's nothing,
   ALA:  ?t?h[hhh
   KAR:      [°uh°Keh,
→  ALA:  =Okay:,=uhm, (did-B-didya) Bruce leave you a
         no:te?
→  KAR:  nNo.
```

(20)

```
   B:  My parents didn't necessarily support it? (0.2) But
       then whe:n the school like (0.3) threatened my
       personal (freedom); (0.7) they (0.5) they bo:rded with
       me: in [my (thre-) my battle.
   P:         [They did?
   B:  °Y[eah.°
→  P:    [Were your parents uh: from::? (0.3) the south?=Or:
       (0.2)di[h
→  B:         [No.
       (0.4)
   P:  The[y move down there?
   B:     [(My-)
       (0.3)
   B:  Yeah.=[My
   P:        [What for.
```

Table 5. Differences in sound production between stand-alone *no*s in embedded sequences and after topic proffers from (19) and (20)

Sequential location	Length	Pitch height
Stand-alone *no* embedded in a longer project (19)	300 ms	mid and low
Stand-alone *no* after topic proffer (20)	490 ms	low and bottom

Tokens of *no* in stand-alone *no* utterances thus differ in their sound production according to the sequential environment in which they occur.

We now examine *no* in *no*-plus turns across the two sequential environments.

No-*plus turns*

In our collection, tokens of *no* in *no*-plus turns vary dramatically by sequence type. When they occur within a longer projected telling, they are short (under 220 ms), typically show small slope with slight fall, are louder than the surrounding talk, and may exhibit formant movement anticipating a following sound. *No*-tokens in *no*-plus turns that occur as part of a topic proffering sequence, on the other hand, tend to be longer (over 300 ms) and are mid or higher in the speaker's range. Examples (21) and (22) illustrate these marked differences.

(21) *no*-plus turn by a primary speaker in a longer project

```
D:  He's got like two goals this year and he plays all
    The time, I mean that guy is so: [terrible.
K:                                   [Is he Pierre
    Turgeon's brother?
    (0.5)
→ D: No I d- they're not related.
```

(22) *no*-plus turn after topic proffer

```
B:  Do you ever wonder if you're an alie[n?
J:                                      [professional
    sm- [schmoozers.
T:      [ ( )
    (0.9)
→ J: No:, I don't wonder if I'm an alien,
    I wonder if aliens are controlling me.
```

In example (21), *no* is 215 ms and is produced low in the speaker's range. In example (22), on the other hand, which is after a topic-proffering question, *no* is 500 ms and is produced mid in the speaker's range. Table 6 displays the relevant figures for each example.

Tokens of *no* in *no*-plus turns after topic proffers are thus much longer and higher in the speaker's range than *no*s in *no*-plus turns produced by primary speakers within longer projected tellings. Thus the sound production of *no* in *no*-plus turns appears to be produced distinctly depending on the sequential location in which it occurs. It seems that sound production, which serves as a resource for turn projection, may be sequence- and activity-specific. Furthermore, we can note that the practice we have uncovered of doing a token of *no* in a *no*-plus turn with short duration and lower in the speaker's range may be designed so as to project more to come while contextualizing the entire turn as "parenthetical" (see Local 1992; Curl et al. 2002); similarly, the practice of producing a token of *no* in a *no*-plus turn long and higher in the speaker's range may be designed so as to project "significantly more to come," as Couper-Kuhlen (2001) has found with high onset in reason-for-the-call slots.

4. Discussion

The exploratory study presented here, although based on a small set of cases of each type, provides specific and compelling initial evidence that sequential location, action and phonetics work together to accomplish turn projection. Let us consider the two general sequential environments we have focused on in this report, reviewing patterns and differences within and across those environments.

In our data, *no*-initiated turns within longer projected agendas are clearly distinguished both by sound production features and by action, including locally constructed participant roles of speaker and recipient in an activity. With respect to sound production, stand-alone *no*s are longer and quieter than *no* tokens in *no*-plus turns in this environment, and they show no formant movement in anticipation of a next sound. Loudness thus gives an early clue as to

Table 6. Differences in sound production for *no*-plus turns in embedded sequences and after topic proffers

Sequential location	Length	Pitch height	Pitch movement
No-plus in embedded sequence (21)	215 ms	low	rise-fall
No-plus in topic proffer sequence (22)	500 ms	mid	level with slight fall

whether or not the *no* projects more to come, and duration and formant movement provide later clues. However, it is important to note that in our examples within longer projected agendas, speaker status within that environment can provide for anticipation as to whether the speaker will continue past *no* or not. Participants produce stand-alone *no*s when they are the recipient of an extended telling and are being asked by the primary speaker for information that will reveal their level of knowledge related to the continued telling. In contrast, participants produce *no*-plus turns when they are the primary speaker of an on-going project and have been asked a background question by the recipient of the extended telling; the primary speaker, in these cases treats her/himself as accountable for clarification beyond the *no* response.

Thus whether or not a stand-alone *no* or a *no*-plus turn will be produced seems to already be projectable from the action environment and participants' roles within it. Nonetheless, the phonetics of *no* in the two types of turns in this context are done in a systematic way as part of the projection work of each *no* token. They are produced in a manner that displays whether or not the *no* projects more to come: as noted above, length, loudness, and formant movement are used to display, from early on as well as late in the *no*, whether the *no* projects more to come. In the context of longer projected tellings, then, sound production and action, including participant roles, together provide resources for turn projection.

One could argue in such a case that it is redundant for phonetics to display turn projection if the action environment has already taken care of that. While in some logical sense that may be true, our data suggest that turn construction is not based in such logic; rather, it seems that action types, in particular sequential environments, are built with special sound features such that they are distinctive phonetically.

In the environment of topic proffering questions, in our collection, the role of sound production in turn projection is more prominent. The action and participation roles with topic-proffering questions, for both stand-alone *no* cases and *no*-plus turns, seem quite similar, with the questioner being the topic profferer. In this type of sequence, then, the phonetics of *no* may carry greater weight in projecting, or declining to project, more to come. In fact, the phonetics of these two types of *no*s display dramatic differences. Stand-alone *no*s in this sequential environment display their lack of projection from their outset: they start low or bottom in the speaker's range, and they exhibit a pitch contour which has a very slight fall ending flat or with a very small upward movement. These tokens also display a notable decrease in energy by the end of the token. *No* tokens in *no*-plus turns in topic proffering environments, in

contrast, start mid or higher in the speaker's range and begin with a small rise but end with a fall. The energy of these tokens is also more equally distributed across the token. Pitch height, direction of pitch movement, and distribution of energy thus clearly distinguish whether or not the *no* projects more to come in the topic proffer environment.

5. Conclusion

We began this study by looking for phonetic differences between stand-alone instances of *no* and tokens of *no* in *no*-plus turns, constraining the cases to *no* responses to turns functioning as *yes/no* questions. Looking at the phonetics of the *no* turns in this aggregate, one does not find clear phonetic orderliness indicative of resources for turn projection. That is, the original search showed that the phonetics of the two types of *no* tokens did not clearly distinguish whether *no* projected more to come or not. However, in the process of looking closely at both action and sound, we discovered another kind of order related to the broader sequential environments in which *no* turns occurred. When we widened our analytic lens to include a larger sequential environment for each of the *no*-initiated turns, and noted the different roles of the speakers delivering the *no* turn, patterns emerged. The two general sequential environments were (1) within longer projected tellings, and (2) after topic-proffering questions; we found sound distinctions both within and across these environments. Thus, with more sustained attention to action in context, we were able to observe orderliness with respect to both action and sound production in relation to turn projection.

Our preliminary findings suggest that the projection properties of a word like *no* are not determined simply by the place of *no* within an adjacency pair or even a larger sequence of interaction; nor are they determined simply by the phonetic characteristics of the production of *no*. Rather, it seems that there are particular, sequentially-specific ways of phonetically doing *no* that are associated with whether that *no* will stand alone or not. Sequence, action, and phonetics work together in projecting the trajectory and shape of a *no*-initiated turn.

These findings are in keeping with the principles of lexico-phonetic-syntactic patternings suggested by Fox (2000) under the rubric of micro-syntax. The term "micro-syntax" is meant to capture the highly local, and sequence-action specific nature of linguistic formatting. Although the findings reported here do not concern syntax, as traditionally understood, they

reveal highly sequential and action-specific phonetic patterning of the negative particle *no*.

Our observations also suggest relationships to work by other scholars of conversational phonetics. The production of *no*-plus turns after topic proffers shows characteristics similar to what Couper-Kuhlen (2001) has found with topic beginnings: high onsets projecting further talk by the same speaker. On the other side, the *no*-plus turns produced by primary speakers in longer projected agendas are in some ways reminiscent of what Local (1992) and Curl et al. (2002) detailed with respect to the prosodic production of talk contextualized as parenthetical. By producing responses to recipient questions, using lower pitch and shorter duration, the primary speaker may be building that response so as to treat its content as off-the-point, setting up for a return to the main telling or projected agenda.

Although we have not taken on this challenge in the present study, our observations point back to the need to elaborate our understanding of such notions as alignment, affiliation, and agreement in interactional sequences, and their relationship to projection. Cases like (23), repeated below, are both familiar and yet problematic with respect to the shaping of disagreeing responses:

(23)

```
ALA:  Karen Baxter?
KAR:  Yea?
ALA:  Yer not busy are yuh¿
      (0.3)
KAR:  Well yeah, I a:m.
ALA:  Well thi:'ll be qui:ck, I mean it's nothing,
ALA:  ?t?h[hhh
KAR:      [uh°Keh,
ALA:  =Okay:,=uhm, (did-B-didya) Bruce leave you a
      no:te?
KAR:  nNo.
```

If disagreeing or rejecting turns are dispreferred, and dispreferred actions are normatively shaped into longer turns (Pomerantz 1984; Sacks 1987), this provides a basis for the projection of *no*-plus turns in the delivery of disagreement. However, a negative response to a question such as *Did Bruce leave you a note?*, given the larger interactional sequence and the speakers' roles within it, may not be a dispreferred or disaffiliative action;[11] *no* in this context acts as a go-ahead to the primary speaker's larger project and thus appears to align with the primary speaker's agenda, in spite of being negative and un-elaborated. While aspects of preference and alignment in sequences have received considerable attention in conversation analytic research, there is thus more to be done with respect to the relationships between preference organization and the projection of turn trajectories.

As a final note, we would like to suggest that the findings reported on here raise questions regarding the notion of "default final intonation," a concept which is occasionally mentioned in the conversation analysis literature on turn-taking. Our findings suggest that final intonation is not a matter of a phonetically consistent "default"; rather, each sequentially-specific action-formatted stand-alone *no* has its own final intonation, a final intonation which appears to be sensitive to its sequential format. For example, the stand-alone *no*s after topic proffers show a final intonation that is a fall with either a level or slightly upturned ending, while the stand-alone *no*s in subsidiary sequences show either a slight fall overall or a slight rise overall. If our findings are representative, then further research is warranted to work out the action and sequence-specific nature of the sound production of what might be considered turn-final intonation in talk-in-interaction.

Notes

* We borrow the phrase "Getting Past No" from the popular book by that title (*Getting Past No: Negotiating Your Way from Confrontation to Cooperation*, by William Ury, Bantam 1993). For their help with our thinking for this chapter, we thank Elizabeth Couper-Kuhlen, Traci Curl, John Local, Richard Ogden, Gareth Walker and Ann Wennerstrom.

1. By "trajectory of a turn in progress" we mean the movement either toward continuation or ending of a turn at talk.

2. The most obvious hypothesis that might follow from the conducive/neutral distinction would be that responses to conducive questions would display an orientation to the bias expressed in the question. If a response went counter to the bias, then one would predict that an account for going against the expectation would be relevant and projected. This would mean that a *no* response going counter to the bias of a conducive question would be formulated as a *no*-plus turn, while a *no* that aligns with the bias of a turn would be presented as a stand-alone *no* turn. Counterexamples are easily found. Examples (1)–(3), involve questions with neutral polarity, but the responses are all *no*-plus turns.

3. We thank Traci Curl, Richard Ogden and Gareth Walker for their help with our acoustic analyses.

4. Barbara Fox and John Hellermann.

5. Section 2 includes a complete description of our methods for analysis and reporting.

6. One of our tokens of *no* in a *no*-plus turn is actually 310 ms. This token is considerably longer than the other 5 tokens, which are: 220, 215, 200, 160 and 130 ms.

7. While we hear evidence of formant transition from the vowel of *no* to a following sound in *no*-plus turns, we are unable to show a clear distinction between formant transition in *no*-plus turns and stable formants in stand-alone *no* tokens in our acoustic analyses. One reason for the lack of conclusive acoustic evidence is the particular vowel under consideration. The tense mid-back vowel in American English is most often a diphthong, which made the observation of F1 and F2 transition from the vowel difficult. A second reason for the difficulty in illustrating the change in vowel quality that we hear is the relatively poor recording quality of conversational data collected outside of a laboratory setting. While we do not include further discussion of formant transition with respect to projection of further talk, we see this area as worthy of further investigation.

8. The average duration of stand-alone *no* in this sequential environment is 325 ms; the average duration of *no* tokens in *no*-plus turns in this sequential environment is 205 ms.

9. "Baseline" refers to the bottom pitch in the range of a particular speaker. In determining pitch levels of the *no* tokens, one analyst listened to 5 minutes of speech for each relevant speaker and noted the lowest (normal phonation) and highest pitch for that speaker. The pitch differences (in semitones) between the two extremes was then divided into 5 equal spans: bottom, low, mid, high and top. So 6–8 ST above baseline might have been mid for one speaker but low for another, depending on their total pitch range. For example, some speakers had a range of 20 ST, others had a range of only 10 ST. The speaker's lowest pitch was thus used as equivalent to 0, and their highest pitch was the highest point in the graph, with 5 equal intervals between them. Gareth Walker graciously provided us with a PRAAT script for creating graphs scaled to speaker's baseline.

10. Interestingly, this slightly rising tail (as in Figure 2) is something that acoustic analysis picks up but the authors and other analysts have not heard as a "rise". This highlights the importance of auditory analyses in investigations of the role of sound production in talk-in-interaction. Perception of sound production differs from acoustic measurements ('tHart et al. 1990; Couper-Kuhlen 1993) and analysts interested in participants' interpretations of the sequential talk-in-interaction need to place primacy on their own perceptions in auditory analyses.

11. We thank Belinda Collins for drawing our attention to the problematic nature of the term "disagreement" with respect to the actions of some of the turns we analyzed in a presentation for the ICCA in Copenhagen in 2002.

References

Biber, D., Johansson, S., Conrad, S., & Finegan, E. (1999). *Longman Grammar of Spoken and Written English*. Essex: Pearson.

Brazil, D. (1997). *The Communicative Value of Intonation in English*. Cambridge: Cambridge University Press.

Couper-Kuhlen, E. (1986). *An Introduction to English Prosody*. Tübingen: Niemeyer.

Couper-Kuhlen, E. (1993). *English Speech Rhythm: Form and Function in Everyday Verbal Interaction*. Amsterdam: John Benjamins.

Couper-Kuhlen, E. (1996). "The prosody of repetition: On quoting and mimicry." In E. Couper-Kuhlen & M. Selting (Eds.), *Prosody in Conversation: Interactional Studies* (pp. 366–405). Cambridge: Cambridge University Press.

Couper-Kuhlen, E. (2001). "Interactional prosody: High onsets in reason-for-the-call turns." *Language in Society, 30*, 29–53.

Couper-Kuhlen, E. & Selting, M. (2001). "Introducing Interactional Linguistics." In M. Selting & E. Couper-Kuhlen (Eds.), *Studies in Interactional Linguistics* (Studies in Discourse and Grammar 10) (pp. 1–22). Amsterdam: Benjamins.

Curl, T., Fox, B. A., & Hayashi, M. (2002). "A family of phonetic practices: an exploration of the relationship among phonetics, syntax and interaction." Paper delivered at the second EURESCO Interactional Linguistics meeting, Helsinki, Finland.

Ford, C. E. (2001). "At the intersection of turn and sequence: Negation and what comes next." In M. Selting & E. Couper-Kuhlen (Eds.), *Studies in Interactional Linguistics* (pp. 51–79). Amsterdam: John Benjamins.

Ford, C. E. (2002a). "Denial and the construction of conversational turns." In J. Bybee & M. Noonan (Eds.), *Complex Sentences in Grammar and Discourse* (pp. 61–78). Amsterdam: Benjamins.

Ford, C. E. (2002b). "Free-standing vs. turn initial 'okay': some observations on sequence, action and sound production." Plenary for the Euroconference on Interactional Linguistics, Helsinki, Finland. Sponsored and funded by the European Scientific Foundation. September.

Ford, C. E., Fox, B. A., & Thompson, S. A. (1996). "Practices in the construction of turns: The "TCU" revisited." *Pragmatics, 6*, 427–454.

Fox, B. A. (2000). "Micro-syntax in conversation." Paper delivered at the first EURESCO Interactional Linguistics conference, Spa, Belgium.

Goodwin, C. (1981). *Conversational Organization: Interaction Between Speakers and Hearers*. New York: Academic Press.

Hart 't, J., Collier, R., & Cohen, A. (1990). *A Perceptual Study of Intonation: An Experimental-phonetic Approach to Speech Melody*. Cambridge: Cambridge University Press.

Hellermann, J. (2003). *The Interactional and Organizational Work of Prosody in Classroom Discourse Activities*. PhD Dissertation, University of Wisconsin-Madison.

Heritage, J. & Roth, A. (1995). "Grammar and institution: Questions and questioning in the broadcast news interview." *ROLSI, 28*, 1–60.

Houtkoop, H. & Mazeland, H. (1985). "Turns and discourse units in everyday conversation." *Journal of Pragmatics, 9*, 595–619.

Jefferson, G. (1973). "A case of precision timing in ordinary conversation: Overlapped tag-positioned address terms in closing sequences." *Semiotica, 9*, 47–96.

Jefferson, G. (1978). "Sequential aspects of storytelling in conversation." In J. Schenkein (Ed.), *Studies in the Organization of Conversational Interaction* (pp. 219–248). New York: Academic Press.

Jefferson, G. (1984). "Notes on a systematic deployment of the acknowledgement tokens 'yeah' and 'mm hm'." *Papers in Linguistics, 17*, 197–216.

Labov, W. & Fanshel, D. (1977). *Therapeutic Discourse*. New York: Academic Press.

Lerner, G. (1991). "On the syntax of sentences-in-progress." *Language in Society, 20*, 441–458.

Local, J. (1992). "Continuing and restarting." In P. Auer & A. Di Luzio (Eds.), *The Contextualization of Language* (pp. 273–296). Amsterdam: John Benjamins.

Local, J. (1996). "Conversational phonetics: some aspects of news receipts in everyday talk." In E. Couper-Kuhlen & M. Selting (Eds.), *Prosody in Conversation* (pp. 177–230). Cambridge: Cambridge University Press.

Pomerantz, A. (1984). "Agreeing and disagreeing with assessments: Some featnres of preferred/dispreferred turn shapes." In J. M. Atkinson & J. Heritage (Eds.), *Structures of Social Action: Studies in Conversation Analysis* (pp. 57–101). Cambridge: Cambridge University Press.

Pope, E. (1973). "Question-answering systems." In C. Corum, T. C. Smith-Stark, & A. Weiser (Eds.), *Papers from the Ninth Regional Meeting of the Chicago Linguistic Society* (pp. 482–492). Chicago: Chicago Linguistic Society.

Quirk, R., Greenbaum, S., Leech, G., & Svartvik, J. (1985). *A Comprehensive Grammar of the English Language*. New York: Longman.

Raymond, G. (2000). *The Structure of Responding: Type-conforming and Nonconforming Responses to Yes/No-type Interrogatives*. PhD Dissertation, UCLA.

Raymond, G. (2003). "Grammar and social organization: Yes/no interrogatives and the structure of responding." *American Sociological Review, 68*(6), 939–967.

Sacks, H. (1987). "On the preferences for agreement and contiguity in sequences in conversation." In G. Button & J. R. E. Lee (Eds.), *Talk in Social Organisation* (pp. 54–69). Clevedon: Multilingual Matters.

Sacks, H. (1992). *Lectures on Conversation*. New York: Blackwell.

Sacks, H., Schegloff, E., & Jefferson, G. (1974). "A simplest systematics for the organization of turn-taking for conversations." *Language, 50*, 696–735.

Schegloff, E. (1979). "The relevance of repair to syntax-for-conversation." In T. Givon (Ed.), *Syntax and Semantics: Discourse and Syntax*, Vol. 12 (pp. 261–286). New York: Academic Press.

Schegloff, E. (1980). "Preliminaries to preliminaries: 'Can I ask you a question?'" *Sociological Inquiry, 50*, 104–152.

Schegloff, E. A. (1995). "Sequence organization." In *Talking in Interaction: An Introduction to Conversation Analysis*. Unpublished Ms. Los Angeles: UCLA, Department of Sociology. [To be published as *A Primer in Conversation Analysis: Sequence Organization*. Cambridge University Press.]

Schegloff, E. (1996). "Turn organization: one intersection of grammar and interaction." In E. Ochs, E. Schegloff, & S. Thompson (Eds.), *Interaction and Grammar* (pp. 52–133). Cambridge: Cambridge University Press.

Schuetze-Coburn, S., Shapley, M., & Weber, E. (1991). "Units of intonation in discourse: a comparison of acoustic and auditory analyses." *Language and Speech, 34*, 207–234.

Selting, M. (2000). "The linguistic analysis of turn-constructional units: A challenge both in itself and for received linguistic categories." Paper delivered at the American Association of Applied Linguistics. Vancouver, BC.

Streeck, J. (1995). "On projection." In E. Goody (Ed.), *Social Intelligence and Interaction* (pp. 87–110). Cambridge: Cambridge University Press.

Terasaki, I. (1976). *Pre-announcement Sequences in Conversation* [Social Sciences Working Paper 99]. Irvine: University of California.

Ward, G. & Hirschberg, J. (1992). "The influence of pitch range, duration, amplitude and spectral features on the interpretation of the rise-fall-rise intonation contour in English." *Journal of Phonetics, 20*, 241–251.

Wennerstrom, A. (2001). *The Music of Everyday Speech: Prosody and Discourse Analysis*. Oxford: Oxford University Press.