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## The Learned /t/: Phonological Variation In Orthodox Jewish English

# **The Learned /t/: Phonological Variation In Orthodox Jewish English**

Sarah Bunin Benor

## **1 Introduction**

A number of linguistic variables have similar social meanings across regions and in diverse communities of practice. For example, the realization of the “-ing” suffix as [ɪn], as in “walkin’,” has been reported as indexing informality in a number of populations from England to New England (i.e. Fischer 1958, Trudgill 1974). Fortis realizations of [θ] and [ð] have been noted in urban populations around the country as connoting toughness or emphatic tone (Eckert 2000:221).

Another one of these resources is the realization of word-final /t/ as released rather than glottalized. A high frequency of /t/ release has been described as a stylistic resource among female nerds (Bucholtz 1996), science fiction fans (Campbell-Kibler, p.c.), and a gay male activist lawyer (Campbell-Kibler et al. 2000). In all of these cases, this feature seems to index intelligence, erudition, and articulate speech. This study finds that word-final /t/ release is also common among Orthodox Jews and that within the community males release their /t/s over twice as frequently as females.

In this paper, I describe the internal and external factors that contribute to this variable (sections 3, 4), discuss the possible meanings of it (section 5), and deal with the feasibility of assigning social meanings to individual linguistic variables (section 6), an important issue in sociolinguistics.

## **2 Community Background**

Fieldwork for this paper was conducted in a community of Chabad Jews in Northern California. These Ultra-Orthodox Jews maintain some separation from general American society, but they have regular contact with non-Orthodox Jews. The Chabad community I studied has a small primary school, and after age 13 most of the children go to Chabad Yeshivas (religious secondary schools) in other cities. While most of the children were born in Northern California, their parents come from New York, New Jersey, and elsewhere. The teachers at the school are from Los Angeles, Montreal, New York, and New Jersey. Because of this regional diversity, the speech observed in this community will be taken as a sample of North American

Orthodox Jewish English (or more specifically Eastern Ashkenazic Orthodox English (Gold 1985:292)), rather than of Northern California English.

Linguistically, Chabad Jews are somewhat distinct from non-Orthodox Jews and non-Jews. Their everyday language is English with many unique features, including loan words from Yiddish and Hebrew (Benor 1999), some syntactic transfer from Yiddish, and phonological and prosodic features (see section 7). From a young age all of them have regular contact with Hebrew through prayer and text study. Some have contact with Yiddish, which is sometimes used in child-directed speech and in boys' Yeshivas. However, of the 16 young people in my study (see names in Fig. 1), only Moyshe, Dovid, Chayim, and Leah claimed speaking ability in Yiddish.

### 3 Methodology

The methodology for this study included observations and recordings at the local Chabad-run primary school and at the home of the community's main rabbi and his 12 children. I formed a corpus out of about five hours of speech mostly from classroom interactions. It includes 16 speakers, 6 male and 10 female, between the ages of 9 and 23. The ages correspond to levels of education; throughout the paper I refer to the age groups as Local, Yeshiva, and Teachers. Local students are those who have only been educated locally (at the Chabad school where I observed), Yeshiva students have had some Yeshiva education in other cities, and Teachers have had teacher training and now teach at the school. Names have been changed.

	Local (Age 9-13)	Yeshiva (14-19)	Teachers (20-23)
Female	Rochel, Aliza, Miri, Chavi, Perl	Geula, Bruchi	Nomi, Leah, Dvoyri
Male	Zev, Shmuel, Yakov	Moyshe, Dovid	Chayim

Figure 1: The 16 participants, divided by age and gender

For most of the conversations I was present but did not participate. All of the interactions recorded were single-sex, since the classes are divided according to gender (all girls have female teachers, and all boys have male teachers).

I coded transcripts of these conversations for tokens of /t/ in the following environments: sentence-final, at the end of intonational phrases, before empty pauses, and before filled pauses (hesitation particles). Four variants of underlying /t/ were included: zero, glottalized (which is most common in American English), flap, and released (but not flapped). The binomial analysis compared the fourth variant, release, to all the others combined.

At first, I coded all word-final /t/s. An analysis of 600 tokens (using Goldvarb 2.0) found that males released their /t/s slightly more frequently than females, but that the difference was not significant:

	[t]	N=
<b>Female</b>	14%	411
<b>Male</b>	20%	178

Not significant

Table 1: Preliminary data: All tokens of word-final /t/

However, in these data, I found that there was a significant difference when I included only sentence-final tokens in the analysis.

	[t]	N=
<b>Female</b>	20%	100
<b>Male</b>	43%	56

Significance:  $p \leq 0.005$

Table 2: Preliminary data: Sentence-final /t/s

I continued the coding, including only sentence-final /t/s, /t/s at the end of intonational phrases, and /t/s before empty and filled pauses. A total of 495 tokens were included in the analysis.

The independent variables I looked at include two external and four internal factors:

- a. Gender
- b. Age (Local, Yeshiva, Teacher)
- c. Location in Sentence (Internal, Final)
- d. Phrasal Stress (Stressed, Unstressed)
- e. Preceding Segment
- f. Following Segment

Results are presented in section 4.

## 4 Results

### 4.1 External Factors

### 4.1.1 Gender

Males and females show a significant difference in frequency of /t/ release.

	[t]	N=
<b>Female</b>	19%	324
<b>Male</b>	47%	171

Significance:  $p \leq 0.001$

Table 3: Frequency of /t/ release by gender

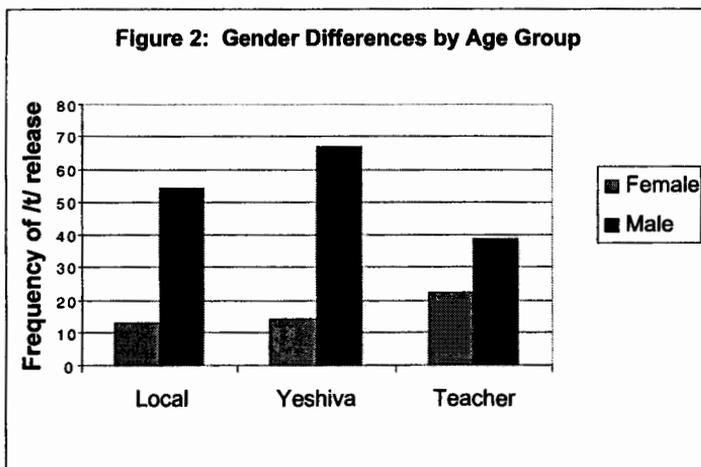
There is a similar difference in rate of glottalization.

	[ʔ]	N=
<b>Female</b>	77%	324
<b>Male</b>	50%	171

Significance:  $p \leq 0.001$

Table 4: Frequency of /t/ glottalization by gender

Figure 2 shows that the gender difference is large in all age groups (significant at the  $p \leq .01$  level or better).



**4.1.2 Age/Schooling**

Goldvarb found this factor insignificant in its overall model. The percentages are presented in Table 5:

	[t]	N=
<b>Local (9-13)</b>	30%	122
<b>Yeshiva (14-19)</b>	33%	66
<b>Teachers (20-23)</b>	27%	307

Table 5: Frequency of /t/ release by age

**4.2 Internal Factors**

**4.2.1 Location in Sentence**

The release of /t/ is somewhat more likely sentence-internally than sentence-finally.

	[t]	N=
<b>Sentence-internal</b>	38%	125
<b>Sentence-final</b>	26%	370

Significance:  $p \leq 0.009$

Table 6: Frequency of /t/ release by location in sentence

One explanation is that many of the phrase-internal /t/s were at the end of intonation contours.

**4.2.2 Location in Intonational Phrase**

According to Nespov and Vogel’s theory of *Prosodic Phonology* (1986), an utterance is divided into one or more intonational phrases (or Is). As Ladd (1996) explains, a boundary between two Is can be a pause, a fall or rise in the F0, or a slowing of the speech rate (1996:235). Also, an I has one or more prosodic peak, or accent. Using these cues, I judged each token of /t/ for its location in its I (as internal or final).

Goldvarb eliminated I as a factor, but when it interacts with “sentence” we see a significant pattern: /t/ tokens that occurred at the end of an I but within a sentence had a higher rate of release than those within an I:

	[t]	N=
<b>Contour-final, sentence-internal</b>	45%	74
<b>Contour-internal, sentence-final</b>	26%	421

Significance:  $p \leq 0.003$

Table 7: Frequency of /t/ release by location in intonational phrase

This difference is related to the practice of separating parts of sentences intonationally. This is common interlinguistically, as Nespor and Vogel explain, and I have observed that it is a frequent practice among Orthodox Jews. (1) is an example of this (underlined words have released /t/):

- (1) Chayim: Nevertheless, when you go and relight it, [intonation break]  
you don't make a br $\wedge$  $\chi$  $\wedge$  ('blessing').

This is especially common in translating Hebrew texts:

- (2) Nomi: (Hebrew phrase) After it's already lit for:  
Miri: For one night, [intonation break] / um, you should do...

#### 4.2.3 Stress

/t/s at the end of stressed syllables are slightly more likely to be released, as stressed syllables in general are less likely to be reduced:

	[t]	N=
<b>Stressed</b>	33%	232
<b>Unstressed</b>	24%	263

Significance:  $p \leq 0.031$

Table 8: Frequency of /t/ release by phrasal stress

#### 4.2.4 Preceding Segment

The preceding segment has a significant effect. Released /t/ is over twice as likely after a consonant as after a vowel.

	[t]	N=
<b>Vowels (a, æ, e, ε, i, u, ʌ, ə, aɪ)</b>	25%	424
<b>Consonants (r, l, n, ŋ, s)</b>	54%	71

Significance:  $p \leq 0.000$

Table 9: Frequency of /t/ release by preceding segment

**4.2.5 Following Segment**

Goldvarb eliminated the Following Segment as insignificant in its model of these data. This is probably because of the word boundary between the two segments (all /t/s tokens were word-final).

However, when the following segment is a pause, there is an interesting gender difference. Among tokens of /t/ that occurred before empty pauses but within sentences, females released them more frequently than they normally do, and males released them slightly less than they normally do.

	<b>Before empty pauses, sentence-internal</b>	<b>Overall release rate</b>
<b>Females</b>	31% (N=54)	19%
<b>Males</b>	44% (N=18)	47%

Table 10: Gender difference in release rate: before pauses vs. overall

One explanation for this is pedagogical pauses. One teacher in particular, Nomi, tends to pause in the middle of a phrase, inviting her students to finish it. She often releases her /t/s when she does this (“/” indicates a pause):

- (3) Nomi: That / each person / of the household / should light / one candle / each night.

When we look at filled pauses, we see that males release their /t/s more frequently than females:

	<b>[t]</b>	<b>N=</b>
<b>Female</b>	33%	6
<b>Male</b>	100%	7

Significance:  $p \leq 0.01$

Table 11: Frequency of /t/ release by gender: Before filled pauses

All of the males’ “ums” and “uhs” come from males who have spent time in Yeshiva: Moyshe, Dovid, and Chayim. An example is given in (4):

- (4) Moyshe: ...everything else like that. It happens to be that, uh, it’s in the nature of people...

It is possible that saying “but um” or “that uh” is part of a masculine style, but more data is needed to determine this.

Figure 3 presents a summary of the results that contribute to the overall model of /t/ release in this Orthodox community (Format:  $x > y = 'x \text{ leads to more /t/ release than } y'$ , presented with frequency of release and factor weight):

**Gender**

Male (47%, 0.781) > Female (19%, 0.338)

**Location in Sentence**

Internal (38%, 0.638) > Final (26%, 0.452)

**Phrasal stress**

Stressed (33%, 0.616) > Unstressed (24%, 0.369)

**Preceding Segment**

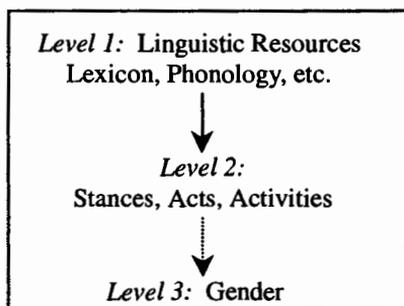
Consonants (all coronal) (54%, 0.745) > Vowels (25%, 0.455)

Figure 3: Significant Results

## 5 The Meaning of /t/ Release

We have now established that /t/ release is more frequent among males, but there is more to learn about the meaning of this variable. The starting point for my inquiry into the meaning is Elinor Ochs' model of "indexing gender" (Ochs 1991), which is presented visually in Figure 4 and explained in 5.1.

Figure 4: "Indexing Gender"



### 5.1 Indexing Chabad Gender

According to Ochs' model, linguistic resources index stances, acts, and activities, which help to constitute gender meanings. In this case the linguistic resource (Level 1) is frequent phrase-final /t/ release. Since males do this more than females, it must have something to do with masculinity (Level 3). But a quantitative study does not identify the mediating level of Stances,

Acts, and/or Activities (Level 2). In order to determine this level, we must examine how /t/ is used, what community members think it means, and what ideologies exist in this community about gender and language.

### 5.2 Speech Analysis: /t/ Is Released When Speakers Are Authoritative or Adamant

A close analysis of the speech samples shows that /t/ is released frequently when the speaker is in a position of authority. (5) is an example from a girls' class. The teacher, Nomi, has just asked a question, and the girls have not given the answer she is looking for. She has the knowledge, and she is in a position to impart it to the students. When she does that, she releases both /t/s (in line c). Then a student questions something the teacher said before, and the teacher does not have a definitive answer for her. In line e, she is no longer speaking authoritatively, and she does not release her /t/s (underline indicates /t/ release, and **boldface** indicates glottalization).

- (5) a. Nomi: Why olive oil?  
 b. Girl: [Cause they made so much?]  
 c. Nomi: They probably did, but / olive oil burns the clearest light.  
 d. Rochel: That's bal taʃχis ('wasting')!  
 e. Nomi: I'm sure they they could have used the rest of it for something else. It doesn't mean they threw it **out**. Doesn't mean they threw it **out**.

Another example of frequent /t/ release during a moment of authority is from a boys' class. In this class, there is a lot of debate about legal issues, and one of the students in particular, Zev, often contradicts what the teacher, Chayim, says. And Zev is often right. In this episode, Zev gives the *wrong* answer, and this puts Chayim in a position of authority. After that, Chayim releases three of his four /t/s:

- (6) Chayim: So what do we say? We say that we-  
 Zev: You're not allowed to until after half an hour.  
 Chayim: No. We say that even if you turn- you, you extinguish the fire beforehand, nevertheless you're still joʃtsə ('not obligated'), and you don't even have to go and relight **it**. But the Ramo (a famous rabbi) goes on and explains: [Hebrew quote] He says you don't [end of intonation contour] have to go and relight **it**, because we paskin ('decide') that the hadlokə ('lighting'), the hadlokə is the mitsvΛ ('commandment'). Nevertheless, when

you go and relight it [end of intonation contour], you don't make a בראַךאַ ('blessing').

One Local student, Shmuel, releases only two of his nine /t/s. In one case, he's the authority, because he understands something that the other students do not. In this example (7), the teacher has just read a Hebrew passage, and the students are confused. The teacher starts to clarify, and Shmuel says, "Oh I get it." The teacher tells him to explain it to the other students, and at the end of that explanation, Shmuel says:

(7) Shmuel: But if you take out two candles, you're for sure gonna be using one that's not.

The only other time Shmuel releases a sentence-final /t/ is when he is being adamant. He is trying to get his classmates to do a calculation his way, and he says:

(8) Shmuel: Nu? Put some zeros on it.

"Nu" is a Yiddish word that expresses impatience. Here he thinks he is the authority on how to figure out the problem, and he expresses this by being adamant (and releasing his /t/).

Another student, Zev, is frequently adamant during class, questioning the teacher's authority and displaying his own acumen. Often when he contradicts the teacher or others, he releases his /t/s. (9) is an example:

(9) Chayim: Candles, sure you are.

Zev: No, you're not. In the ful ('synagogue') you're not.

We have now established that /t/ release indexes authority. The speaker considers himself learned or authoritative about what he is saying, and sometimes he expresses this by being insistent or adamant.

### 5.3 Community Members' Thoughts on /t/

Another way to determine the meaning of a variable is to gauge community members' reactions to it. Although I did not conduct a matched guise test, I did tell one Chabad woman what I had found – that males pronounce /t/ at the end of words more than females. She said it does not surprise her that teenage girls "drop their /t/s" – they are more "sloppy" with their speech, using "like" all the time. One meaning of /t/ glottalization, at least to this

woman, is sloppiness. And the converse, release/aspiration, would mean precision.

The qualities of authority and precision are similar to what others have found in studies of /t/ release in the United States. Bucholtz says that female nerds use hyper-articulation and learned words to help construct personae of intelligence, an important aspect of their nerd identity. How does a stance of authority or learnedness relate to gender meanings in the Chabad community? To answer this, we can look at ideologies about gender and language.

#### **5.4 Ideologies of Gendered Language in the Chabad Community**

As I explain in an earlier paper (Benor 1999), intellectual achievement, or learnedness, is an important quality in the Ultra-Orthodox community, and it is associated more with males than females. As El-Or (1994) says, "For men, knowledge, erudition, and scholarship are a means of enhancing their status, are the basis for the creation of leadership, and grant official sanction to male control of society" (1994:7). Males are the religious authorities of Ultra-Orthodox communities.

We have now filled in the missing link (Level 2) in the index model and determined how it is connected to Levels 1 and 3. Frequent /t/ release indexes authority, learnedness, and precision, qualities which are associated with males in this community.

#### **5.5 Tools of Analysis**

In determining the links in Ochs' model, various tools were used at each level. First, a quantitative study showed that frequent /t/ release is more common among males. Then an analysis of speech patterns showed that /t/ release is common when the speaker is authoritative, learned, or adamant. Finally, an analysis of the community's ideologies showed that authority and learnedness are associated with masculinity. These steps are shown in Fig.5:

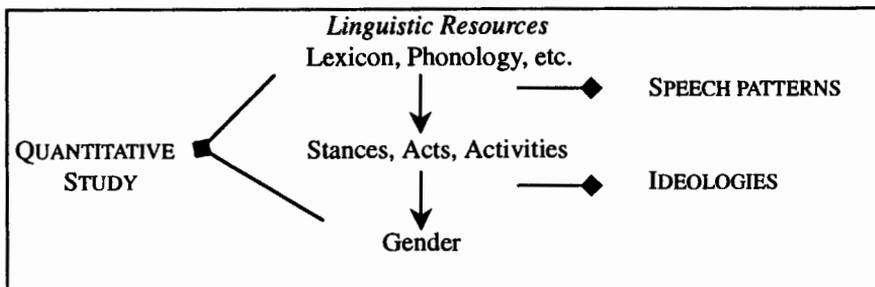


Figure 5: What analysis can connect each level?

## 6 Issues in Assigning Meaning to Variables

A number of issues arise when we try to assign social meaning to individual linguistic variables.

### 6.1 Evidence

Data from analysis of speech and ideologies can strongly suggest that a feature is associated with a stance or activity. But the most convincing evidence would be if community members picked out that feature as having a specific meaning. Since phonological features are often below the surface of consciousness, asking a speaker directly “what does released /t/ mean to you” might not yield a useful response. One way to test hypotheses is by using a matched guise test where the only difference between two utterances is the presence or absence of the feature at hand. If listeners determine, for example, that samples with released /t/s are more learned, authoritative, or adamant than those with glottalized /t/s, then the researcher has more evidence of the feature’s meaning.

### 6.2 Qualitative, Not Quantitative, Evidence

When we are dealing with a stylistic variable such as “authoritativeness,” a quantitative analysis may be impossible. A researcher coding a text would find it very difficult to code every utterance as “+learned” or “-adamant.” A solution to this is not to attempt a quantitative analysis on a stance that cannot be definitively quantified. Qualitative data from speech analysis can be used as extra nuanced support in addition to evidence from variables that can be quantified.

### 6.3 Meaning Not Fixed

Social meaning is frequently evolving; at least to some extent, it is negotiated by the speaker and hearer in every interaction. An utterance rendered the same way in two situations could have two very different meanings. For example, a teacher might say, "It has to be a single **light**" when she is not in a position of authority, and that lack of authority might be conveyed by the glottalization. But then she might say it the same way in a situation where she is clearly authoritative, and that utterance might be understood as authoritative. So while we can make generalizations about the meanings of variables, we cannot extend that generalization to each individual token without analyzing the context.

Also, even in a single utterance the meaning of a variable might not be fixed. There might be a discrepancy between what the speaker thought he was meaning by releasing a /t/ and how the listener interpreted it. The speaker might think he was indexing learnedness, and the listener might interpret it as showing off. Or a speaker who glottalizes might be misinterpreted as being "sloppy."

It is unusual to find evidence of conflicting interpretations, because even if the listener interpreted a variable differently, she might know what was intended, and she might not voice her interpretation. This leaves us with a question: when we are analyzing speech to determine the social meaning of a variable, from whose perspective should we look at the meaning? And how can we be sure *we* are interpreting the intent and the interpretation accurately?

### 6.4 Clusters of Features

One answer to this last question is that it is usually possible to look at a variable in the context of other variables. Variables do not exist in a vacuum; meaning is conveyed or intensified through clusters of features that make up styles. Eckert stresses this:

While the individual variables available in a dialect may correlate with various aspects of social membership and practice, most of them take on interpretable social meaning only in the context of the broader linguistic styles to which they contribute (2000:213).

Although the /t/ variable might be an exception to this, since it has a similar meaning in diverse groups, it is still important for us to look at the larger picture. In the next section I list some of the other linguistic features that

often co-occur with /t/ release, resources that Orthodox males and females use to negotiate various aspects of their identity.

## 7 Other features

The following features are important in Orthodox styles and should be analyzed in future quantitative and qualitative studies.

### Phonology

- /t/ release between vowels/liquids and [ŋ] (i.e., “cotton”) and in “wanted” (only females in this corpus – Montreal influence?)
- Word-final /d/ release (frequent among males and females)
- Pre-nasal [æ] less raised or not raised (maybe more among females)
- Less vowel reduction – especially in “to” (both males and females)

Word order and semantic influences from Yiddish (seems more common among males), i.e.:

(10) Chayim: Let me just explain to you something

(11) Moyshe: The rebe (‘head rabbi’) wanted everybody should be a *faliach* (‘emissary’)

### Prosody

- Intonational chunking, especially after subject (both males and females)
- Chanting intonation contours (seems much more common among males in learning contexts)

### Discourse

- Alveolar click – usually used as a hesitation marker or as a marker of restarting a sentence (seems to be used much more by females), i.e.:

(12) Bruchi: They go deeper into things, they learn [click] you know, girls learn less and just less- they

Geula: No, they learn, they- [click] *Boys* are expected- Boys know like more *χuməf* (‘Bible’) and...

### Lexicon

- Loan words from Hebrew/Yiddish (both males and females, more frequent among males) (Benor 1999)

These features are all important in indexing varying degrees of learnedness, authority, and Orthodoxy. A masculine, learned style will include several of these features. And a feminine, less-learned style will include some of these features but to a lesser extent. Example (13), from the boys' teacher, shows how three features, /t/ release (underlined), Hebrew loan words (translated), and chanting intonation contours (italicized), cluster together to constitute a learned masculine Orthodox style:

- (13) Chayim: *Even if the first one you took was the candle which was from  $\chi$ anikl ('Hanukkah'), the second one that you've taken wasn't. And therefore you're never having hanó ('pleasure') only from  $\chi$ anikl ('Hanukkah') candles and therefore it's mutř ('allowed').*

## 8 Conclusion

We see that variable /t/ aspiration is just one of many linguistic resources available to Orthodox males and females. And linguistic style is only part of their overall style. Other aspects include physical appearance, activities, and home decoration. Speakers are constantly making decisions – consciously or subconsciously – about which elements of style they will use from which sources. And all of these elements help to constitute their group belonging, their identity as male or female, as Jewish, as Orthodox.

To understand the meaning of a variable, quantitative evidence is not enough. It is also necessary to examine how the variable is used in different contexts, what speakers think it means, and what ideologies surround it in the community. These tools can help us not only to interpret individual variables but also to understand the intricacies of linguistic style.

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