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Word-Final /t/-Release and Linguistic Style: An Investigation of the Speech of two Jewish
Women from Metro Detroit

by

Janet Leppala

Thesis

Submitted to the College of Arts and Sciences

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in

English Linguistics

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Abstract

Variationist sociolinguistics is more complex than meets the eye. There are many possible explanations as to why a person uses some linguistic form over another. This paper will compare the use of the word-final /t/-release variant in the speech of two Jewish women from metro Detroit who were born two years apart and who have similar socioeconomic and educational backgrounds. Despite superficial similarities between the speakers, their use of the variant differs considerably—with one speaker using the variant over 15 times more than the other. Building on existing literature on Jewish American speech and on /t/-release, this study will compare the uses of this variant in these two seemingly similar speakers, show that they use the variant in different ways and with varying frequency, and shed light on what is behind those differences. The analysis shows that despite sociological similarities, speakers have an individualized linguistic style.

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Chapter 1: Introduction

The notion of style is not exclusive to Paris runways. As people in society, we determine a lot about a person by what they are wearing, what kind of car they drive, what kind of phone they have, whether they wear makeup, etc. An observer would certainly come to different conclusions about a person depending on whether they're wearing a long flowing dress versus a business suit. That's because our style says a lot about us, and we may have chosen it to do so.

Style does not limit itself to external, material things. A non-material fashion choice could simply be the language that a person chooses to use. According to Eckert (2017), language was once thought of as a purely referential system. After all, someone could utter something like, "That pen is blue," to give a bit of information about a writing instrument, and that would be that. However, consider the following situations:

1. The speaker drops the copula and says, "That pen blue."
2. The speaker says, "That pen is blue," and they pronounce pen like [pɪn].

In each case, something nonstandard is happening and the utterance gives more information than to purely reference the color of the writing utensil. In the first example, imagine the speaker is a user of both African American English (AAE) and Standard American English (SAE). Here, she may have chosen to use copula deletion at a party where the other guests are speaking AAE to express camaraderie. The second speaker may have produced *pen* as [pɪn] because she is on a trip to New York City and, coupled with a Houston Astros' tee shirt, she's showing the world that she's from Texas.

The examples above illustrate that a sentence with the same semantic meaning can be stated in various ways for purely social purposes. The current study will examine the linguistic

variable of word-final /t/ realization and investigate the social meaning of its released variant given the environments in which it appears. Chapter 2 will build on existing sociolinguistic theories about the nature of language variation (Bell, 1984; Eckert, 1989; Labov, 1962), specific studies about Jewish English (Benor, 2001, 2009, 2012, 2018; Burdin, 2019; Levon, 2006; Tannen, 1981), and the word-final /t/-release variant (Benor, 2006; Bucholtz, 2001; Levon, 2006; Podesva, 2007; Podesva, Reynolds, Callier & Baptiste, 2015). This study aims to provide evidence that stylistic uses of linguistic variables are fluid despite preconceived notions about which speakers use what variables in which contexts. This study will show, for instance, that speakers of the same age, gender, religion, education level, and social class use a single variant with differing frequency and meaning.

Chapter 3 will present the study at hand and the methodology. The subjects of this inquiry are two Jewish women from Metro Detroit. The study is an in-depth analysis of the word-final /t/ variable in data from a sociolinguistic interview with each woman. After talking about the methods employed in the study, the data will be carefully analyzed in Chapter 4. The categories of analysis will be phonological, morphological, lexical, thematic, and stance related. Each speaker's results will be considered separately, then the two speakers will be compared to each other and to previous studies to gain a richer understanding of what this variant might mean when it is used. Like Benor (2001) and Podesva et al. (2015), this study will show that there are phonologically favorable environments for /t/-release, such as before a pause in speech. To explain the intraspeaker variation, however, this study will show that each participant means something different when they use the variant. For one participant, /t/-release shows thoughtfulness, and for the other speaker, /t/-release indicates a personal enthusiasm about a particular topic.

In Chapter 5, the current study will be compared to previous studies of word-final /t/-release (Benor, 2006; Levon, 2006; Podesva, 2007; Podesva et al., 2015) and will show that the use of the variant in those studies does not mirror our speaker's usage. Additionally, this paper will posit some explanations as to why our speakers use the variant and what it could possibly mean to them. Finally, Chapter 5 will also discuss any limitations of this study and call for future research.

Chapter 2: Review of Related Literature

2.1 The Sociolinguistic Variable

The simplest definition of a sociolinguistic variable is that it is one of “multiple ways of linguistically ‘doing or saying the same thing’” (Chambers & Trudgill, 1980, p. 50, among others; as seen in Campbell-Kibler, 2010, p. 424).

A very clear example of a linguistic variable is found in Campbell-Kibler’s (2010) work on *-in’* and *-ing* in American English. An illustration of what Campbell-Kibler calls the (ING) variable is shown below:

“I was *running* down the road and I saw Michelle.”

“I was *runnin’* down the road and I saw Michelle.”

Here, the suffix (ING) is the variable, and there are two variants. One variant is the pronunciation [ɪŋ] and the other is the pronunciation [ɪn].

While varying phonetic forms are relatively easy for linguists to identify auditorily, the hard question is understanding *why* variants exist and what they are used for. To state the obvious, these variants are not necessary by phonological rules (although, as this paper will show, there are sometimes phonologically favorable environments for a particular variant). That is, to a native Standard American English speaker, there are no absolute phonological constraints that dictate whether a person says “running” versus “runnin’.” Thus, the nature of the sociophonetic variable seems to be at least, in part, a speaker’s stylistic choice (Bell, 1984; Eckert 2010, among others). This notion still leaves the question of *why*—why is it that a speaker would use one variant over another?

In early work on variationist sociolinguistics, several proposals have surfaced to answer the question of why someone would choose to use one variant over another.

In Labov's (1966) study of English in New York City, he examines (among other things) the pronunciation of the *th* (like in the word "thing") among speakers of various social classes. The groups in question are described as "middle class," "working class," and "lower class." The broad finding in this study is that a person's speech would vary depending on whether they were speaking casually, formally, or simply reading a passage out loud. This type of study gives rise to the notion of "attention to speech" and theorizes that the more that someone is paying attention to what they're saying, the more likely they are to use the prestigious speech form of the high-status group.

In another study by William Labov (1962), he investigates variation in the /ay/ diphthong (as in the words *right*, *high*, etc.) on Martha's Vineyard. After careful research into the history of the various social groups and locales on the island, Labov concludes that the speakers who frequently use the raised /ay/ variant, which is associated with Vineyard fishermen from an earlier era, have an identity that is most associated with being a "true Vineyarder" as opposed to a person who merely lives on the island for the summer or does not feel a special connection to the island. This use of the variant shows a speaker to be part of an "in-crowd" of "Vineyarder" mainstays on the island.

For an additional take on the purpose of variation, Allan Bell (1984) asserts that "style is essentially speakers' response to their audience" (p. 145). In this framework, for instance, a person might not say *-in'* for the progressive form if they were interviewing to be a college professor, or some such formal environment where sounding educated is valued (Campbell-

Kibler's (2010) work on the (ING) variable suggests that people find the *-ing* variant to sound more educated). So, depending on the audience, a person's variable usage will fluctuate.

All of these studies point to potential reasons why a person might switch from one variant to another, yet none of them seems to fully explain the range of sociolinguistic variation we observe. After all, you could imagine paying close attention to speech, but still producing a nonstandard variant. I do it all the time as a teacher when I ask students, "How's it goin'?" While my speech is always measured in the classroom, I make it a point not to sound too stiff. With that said, maybe Labov's notion of variables and social identity is on point. It very well may be a piece of the puzzle, but how does one account for the same variants in different communities? For instance, he speaks about the raised /ay/ diphthong being used as a marker of Vineyard Island identity, but this diphthong has been raised in other communities as well. Surely, in Vancouver, B.C. (Sadlier-Brown, 2012), it has nothing to do with island identity. Finally, Bell's notion of audience design is important, but it doesn't straightforwardly account for a range of possibilities. For one thing, a person may switch from one variant to the next within a conversation to the same person. If your audience is the same, why would your variant change?

All of the aforementioned theories lend important contributions to the field of sociolinguistics and each seems to be valid in some possible context. In putting many explanations for linguistic variation together, Penelope Eckert (2008) talks about the "third wave of variationist study" and the notion of the "indexical field."

To motivate her definition of the "third wave," Penelope Eckert (2012) defines each wave of sociolinguistic variationist study:

- First wave---Researchers drew inferences about social language by comparing the use of sociolinguistic variables to social categories such as “class, gender, ethnicity and age” (Eckert, 2012, p. 87). In this type of study, the speaker is often treated as not having agency over what variant they end up using other than a desire to sound more or less prestigious on the class/power continuum (Eckert, 2012). The Labov (1966) example from above about the pronunciation of *th* is a classic example of a first wave study. There may be a multitude of uses and reasons for the occurrence of a particular variant, but the data will mostly be analyzed only according to very broad, relatively static factors such as social class or gender.
- Second wave---Studies in this wave tend to be more ethnographic in nature. That is, the researcher goes into a particular community and focuses more on what Eckert (2012) calls the “local categories” rather than the macrosociological categories of class, gender, etc. For instance, in Eckert’s own (1989) study of suburban high school students in Michigan, she looks at the speech of the “jocks” and “burnouts.” To simplify the study considerably, the jocks in this school tend to find identity in school-related functions. The burnouts, on the other hand, did not think that school was particularly cool. Instead, they identified with urban areas and life outside of school. In focusing on the minutiae of the groups in this school, she displays a rich understanding of the social and linguistic divisions of the students, and she ascribes more agency to speakers over what linguistic forms they use other than their socioeconomic status.
- Third wave---The third wave of sociolinguistic variationist study sees variants of some variables as a way for speakers to express themselves stylistically. Speakers are, as Eckert (2012) says, “stylistic agents” in this view. The variants that they choose are not

limited solely by their attention to speech, membership in a group, or their audience. Rather, linguistic variation is a symbolic system in society that can represent social concerns, stances, styles, and more (Eckert, 2012).

To give an example of variation in the third wave view, a few terms are important. For one thing, every speaker of a language has a stylistic repertoire. A repertoire can be explained as a person's ability to understand more than one variety of a given language (Schiffmen, 2015). In Standard American English, for example, most people have both the [in] and [ɪŋ] pronunciations for (ING) suffixes in their repertoire. SAE speakers understand and are capable of producing either variant.

For example, if an American English speaker, let's call her Hillary, has had a lot of access to both African American English and Standard American English, her repertoire will likely consist of at least two variants for the variable "third-person singular, present tense verbal inflection." This speaker can either leave the verb uninflected as one would for third-person verb forms in AAE, or she can add an -s to the end of the verb as one would in SAE. Hillary's repertoire for third-person verb endings would look like this (the word containing the variant is bolded):

1. He **sleep** late all the time (AAE).
2. He **sleeps** late all the time (SAE).

The significance of what variant Hillary selects in speech is a key concern of third wave variationist studies. First of all, the thought here is that she *has* a choice and is not simply reacting to her environment. Secondly, the choice is said to be somewhat reflective of the personal style or social meaning that the speaker wishes to convey (Campbell-Kibler, 2010), at

least in some cases. In third-wave variationism, then, speakers can have agency over what form of a variable they use from their repertoire, and each has some social meaning that hearers are possibly aware of (Eckert, 2008).

To expand on this, let's continue to look at the case of Hillary. Let's assume that she's at a party in a city where a particular variant is seen as trendy. If this party is filled with her very chic, young friends, then she may employ that variant along with them. For her buddies who love being à la mode, she'll want to use the variant that indexes trendiness if she wants to fit in.

This brings us to the notion of indexicality. If a variant (such as saying "hey" instead of "hi") represents a laid-back persona, then it is said to *index* laidbackness. Silverstein (2003) asserts that one linguistic feature may have multiple indexical meanings at the same time. For instance, third person -s deletion could index sincerity, working-class background, etc. Eckert (2008) calls the multiple possible meanings of a variant the *indexical field*. The indexical field can consist of meanings that are different from one community to the next, or for multiple possible meanings for a single person.

In third-wave variationist studies, then, the notion of linguistic features as having social meaning, the speaker's potential goals in using them, and what the variable indexes constitute the essence of language variation.

This paper will take into account all of the aforementioned approaches in attempting to understand the differences between the uses of one linguistic feature among two speakers. The variable in question will be word-final /t/. Not only will this study show the phonological environments that favor the released variant, but it will attempt to answer the question of indexicality and motive. If there is a pattern that implies potential intentionality, what does the

speaker want to convey by using word-final /t/-release and what are their social motivations? To help enrich the understanding of our speakers and the specific variable, we'll look at Jewish English in the United States, followed by some of the existing sociolinguistic work on /t/-release.

2.2 Jewish English in the United States

Scholars have been characterizing the features of Jewish American English speech since the early days of sociolinguistics. Uriel Weinreich (1956) made a claim that American Jews have a distinctive intonation that has its roots in Yiddish (as cited in Burdin, 2019).

Additionally, Deborah Tannen (1981) talks about the stereotypical New York Jewish accent and how stigmatized it was at the time when she wrote the paper. As cited in Tannen (1981), there were therapists in California who helped to rid people of their New York accents (Boyer, 1979)—and by extension in Tannen's (1981) work—their *Jewish* accent. Rachel Burdin (2019) conducted a perception study relating to Jewish speakers' unique intonational patterns. Sarah Bunin Benor has contributed a body of work to the characterization of Jewish speech in the United States. We'll see much of her work in the paragraphs that follow.

All of these studies pay homage to the question of what Jewish American English is. To answer, it's helpful to start by looking at Jewish demographics in the United States. In 2017, there were 5.3 million Jewish people living in the United States, and each state has at least some Jewish population (Jewish Agency, 2017). Of this population, Jewish religious practices can be divided into various denominations: 35% of Jews identified as Reform, 18% as Conservative, 10% as Orthodox and 37% as Other/Non-religious (Jewish Agency, 2017).

Understanding the population of Jewish people (or any group) in the United States is key to identifying and understanding their linguistic tendencies. In this study, I will adopt the

perspective of Sarah Bunin Benor (2010, 2011) who says that Jewish English is not exactly a dialect since it is not really a regional variety. In fact, most Jewish people in the United States speak (or have the ability to speak) completely like the non-Jewish population surrounding them (Benor, 2009). Jewish English, then, consists of a collection of linguistic features that people can access to identify themselves as Jewish in conversations, or for whatever purpose they see fit (Benor, 2009). Benor (2011) refers to this set of linguistic features as the “American Jewish Repertoire.”

In this bundle of linguistic resources, there are many features that have been noted to be used by Jewish speakers. The list below contains several—but certainly not all—of the possible linguistic variants contained in the American Jewish Repertoire:

- Word-final /t/-release—The subject of inquiry in this paper, word-final /t/-release, has been noted as a feature of Jewish English by Benor (2010, 2011) and Levon (2006), among others. Although we’ll speak about this in great detail soon, word-final /t/-release is characterized by the full articulation of a /t/ at the end of a word.
- Final /d/ devoicing—Noted by Benor (2018), a word-final /d/ in Jewish English can be devoiced to sound more like a [t]. For example, a Jewish woman from Metro Detroit talked about growing up in the city of West Bloomfield, where *Bloomfield* is pronounced as [blumfijlt].
- Use of Hebrew/Yiddish/Aramaic loanwords—One unique feature that Jewish people can use to distinguish themselves is the use of Hebrew, Yiddish, or Aramaic loanwords (Benor, 2004, 2009). These lexical items are often pronounced using rules of English phonology and users will insert them seamlessly into sentences of English (Benor, 2009). Here is a classic example from Benor (2009):

“We didn't have a *shalom zochor*. The baby is *temeni* like his father and will have a *Brit Yitzchak* the night before” (p. 230).

- Pacing and interaction—In Deborah Tannen's (1981) study of the New York Jewish speech style, she notes many suprasegmental features associated with the flow of conversation. She describes a faster pace of speech and—like Benor (2018)—friendly overlap among conversational participants between turns.
- Prosodic features—In Rachel Steindel Burdin's (2019) paper on “the Perception of macro-rhythm in Jewish English intonation,” she finds that “Jewish English speakers used more rise-falls, more rising pitch accents, and more rising contours compared to non-Jewish English speakers” (p. 12).

It must be reiterated that although these features have been found to be part of the American Jewish Repertoire, they are not accessed by every Jewish person, every time they speak. Rather, speakers may have these linguistic tools at their disposal if and when they want to use them, and some don't have all of these features in their repertoire. A person might choose to use them to show that they are a part of a certain group, or they may use them to distance themselves from people that they don't identify with. Whatever the indexical purpose, a person may consciously or subconsciously choose to use these to construct their desired identity (Benor, 2010).

2.3 /t/-Release

Among the more heavily-studied linguistic features both within the Jewish community and elsewhere, is /t/-release. This variable has been the subject of much sociolinguistic scrutiny.

To define the variable, it helps to know that in Standard American English, /t/'s have very different phonetic realizations depending on their position in a word. For example, word-medial /t/'s are often flapped or glottalized and word-final /t/'s are most often realized in a different way than word-initial /t/'s. Consider the following examples of words paired with their International Phonetic Alphabet (IPA) transcriptions:

- taco [tʰako]—The typical word-initial pronunciation of /t/ in SAE is an aspirated /t/
- mitten [mɪʔm]—In words like *mitten* and *button*, the /t/ becomes a glottal stop, such as in the word *uh-oh*.
- water [wɔɾɚr]—The /t/ in words like *water* and *little* is generally pronounced as a flap or tap in SAE.
- buster [bʌstɚ]—/t/s are unaspirated in syllable onsets when they immediately follow an [s].
- twenty [twɛni]—After /n/'s, the “t” sound can be deleted. So *twenty* is pronounced like *tweny*, *interview* becomes *innerview*, and so on (Seattle Learning Academy, n.d.).
- cat [kaet̚]—At the ends of words, /t/'s are often unreleased in SAE.

The example of the unreleased /t/ in the word *cat* brings us to the subject of this thesis. That is, in American English, word-final /t/'s are often, but not *always* unreleased.

This variant is what Benor (2001) refers to as word-final /t/-release. To define this term non-acoustically, one could say that a released /t/ is easier to identify as a /t/ than a non-released one. It almost will sound like the aspirated, word-initial [tʰ].

For a more technical explanation of word-final /t/-release, Levon (2006) provides an important acoustic characterization of released and non-released /t/'s. He says that “consonant

release is characterized by a short burst of air following stop closure, which appears as sharp spikes in the spectrogram” (p. 187). This “burst of air” is phonetically distinct from regular aspiration. Unreleased stops, on the other hand are “characterized by a fall in F1 and a rise in F2 frequencies associated with alveolar closure” (p. 187).

To state the obvious, there is a phonetic difference between word final /t/’s that are released and those that are unreleased. From this knowledge, a very important query arises. That is, if word-final /t/-release were purely phonologically determined, then one would expect uniformity in usage and pronunciation throughout a given variety of English. However, this is not what linguists have observed. There is much variation in the realization of word-final /t/’s. This simple fact suggests that there might be social motivation among speakers who choose to release their word-final /t/’s.

Given this thought, much research has been done to identify who uses the variant and what it seems to index. Through careful quantitative and qualitative analyses, the following patterns have emerged in the literature about Jewish subjects and /t/-release:

In Benor (2001), “The learned /t/: Phonological variation in Orthodox Jewish English,” the author looks at word-final /t/-release as a variant in a group of 16 Chabad Jewish students from Northern California between the ages of 9-23. She compares released /t/’s in word-final position to their various non-released counterparts. In this study, she looks at the gender of the speaker, their age, the location of the word-final /t/ in the sentence, phrasal stress, the preceding segment and the following segment.

She finds that boys produce roughly two times the amount of released /t/’s that girls do in the sentence-final position. In numbers, males released 47% of these /t/’s while females were at

19%. Phonological factors that lead to the release of the /t/ are the preceding segment (release is more likely after a consonant), position of the word in the sentence (sentence-final stops were released more than sentence-internal ones), and stress (stressed syllables were more likely to be released).

With all that said, gender had a striking impact on /t/-release beyond these linguistic factors, and the question became: why? Benor makes the case in this paper that when the participants were attempting to index Jewish learnedness and authority, they were more likely to release their word-final /t/. This authority and learnedness denote very male qualities within this social group, and this could explain why boys use the variant more than girls.

In another study of the Jewish community, Levon (2006) examined word-final /t/-release among two teenage synagogue members in three different situations. His aim was to see if variation could be predicted in part by “topic and context” (p. 181) in order to see if /t/-release can be linked to Reform Jewishness affiliation. From his data, he found 1388 tokens of word-final /t/. Of these (regardless of the speaker), 227 were released for a total of 16%.

In this study, Levon finds that the participant who is most interested in constructing a Reform Jewish identity is also the person who releases their word-final /t/’s the most (21% release rate). Through a sociolinguistic investigation of the connection between religious social identity construction and language use, the author concludes that this /t/-release indexes an “affiliation with Reform Judaism” (p. 201).

In addition to the studies about Jewishness and /t/-release in particular, there is a body of other important work on the variable. Some other studies are summarized briefly below:

- Bucholtz (2001)—In her study on female nerds in a Northern California high school, Bucholtz finds that the participants use the /t/-release variant to construct their “nerd identity.”
- Podesva (2007)—This study follows a speaker named Heath around in various environments. Heath is a gay man in his mid-twenties (at the time of the study) and a medical student. He uses /t/-release in different places and with different people, and it seems to index something distinct depending on the environment. For instance, when he’s at work in the medical field, he uses /t/-release to index competence. When he’s at a barbecue with his friends, he uses it to show his “diva” side (Podesva, 2007, p. 4).
- Sclafani (2009), as cited in Podesva, Reynolds, Callier & Baptiste (2015)—This study examines comedic impressions of Martha Stewart and finds that the /t/-release indexes something like “goodness.”
- Podesva et al. (2015)—This perception study asked participants to rate politicians who were either releasing or not releasing their /t/’s as: “articulate, intelligent, authoritative, passionate, friendly, sincere, spontaneous, accented and Southern” (p. 65). The authors showed that despite the potential intentions of the speaker, listeners interpret this variable in many different ways. Despite one reputation of /t/-release as an indicator of articulateness, for example, this study did not conclude that this is always the listener’s interpretation.

This body of research on /t/-release offers clues as to potential indexical meanings of the variant and how it is perceived by others. Figure 1 shows a hypothetical indexical field for word-final /t/-release as an aggregate across the communities that have been studied (not the indexical field of the variant for any one individual).

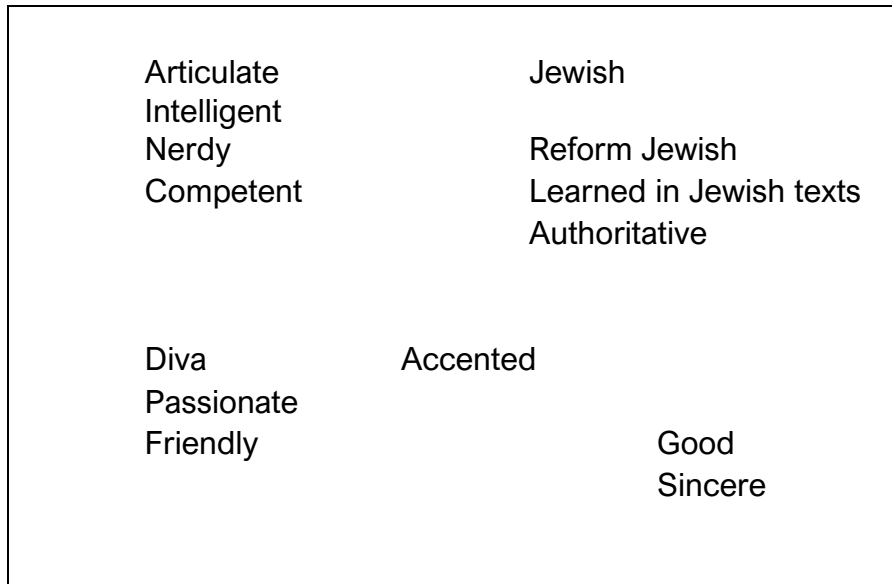


Figure 1. Indexical field of /t/-release based on previous studies. Adapted from “Variation and the Indexical Field,” Penelope Eckert, 2008, *Journal of Sociolinguistics*, 12, p. 466. 2008 by Penelope Eckert.

The studies mentioned in this chapter are invaluable to the larger understanding of how, when, and why people choose to speak one way over another. The current study hopes to add to this work. In Chapter 3, we’ll be taking a look at the Jewish Life and Language in Southeastern Michigan Project at Eastern Michigan University and the methods that were used to study the data provided by that project.

Chapter 3: Project and Methods

3.1 Project: Jewish Life and Language in Southeast Michigan

The data for the current study came from two sociolinguistic interviews that were done as part of an ongoing project that began in 2014 at Eastern Michigan University. The study is called the Jewish Life and Language in Southeast Michigan (JLLSM) Project and it is done as a partnership between the Center for Jewish Studies and the Linguistics Program.

To date, there have been 45 sociolinguistic interviews, that range anywhere from 40 minutes to nearly 3 hours in length. The interviews are conducted by faculty members, Eric Acton and Veronica Grondona (sometimes separately and sometimes together), of the Linguistics Program at EMU. The interviews consist mostly of casual conversation, but every participant is asked to read a wordlist and answer some metalinguistic questions about Jewish English.

The JLLSM participants are all Jewish Americans of varying age, gender, and religious conservativeness. The oldest speaker in the study was born in 1924 and the youngest in 1999. Thirty of the participants have been female and 15 are male. All of the participants have self-identified their religious affiliations as either Secular, Reform, or Conservative. As a point of commonality, all but two of the speakers in the JLLSM project were born and raised in Metro Detroit.

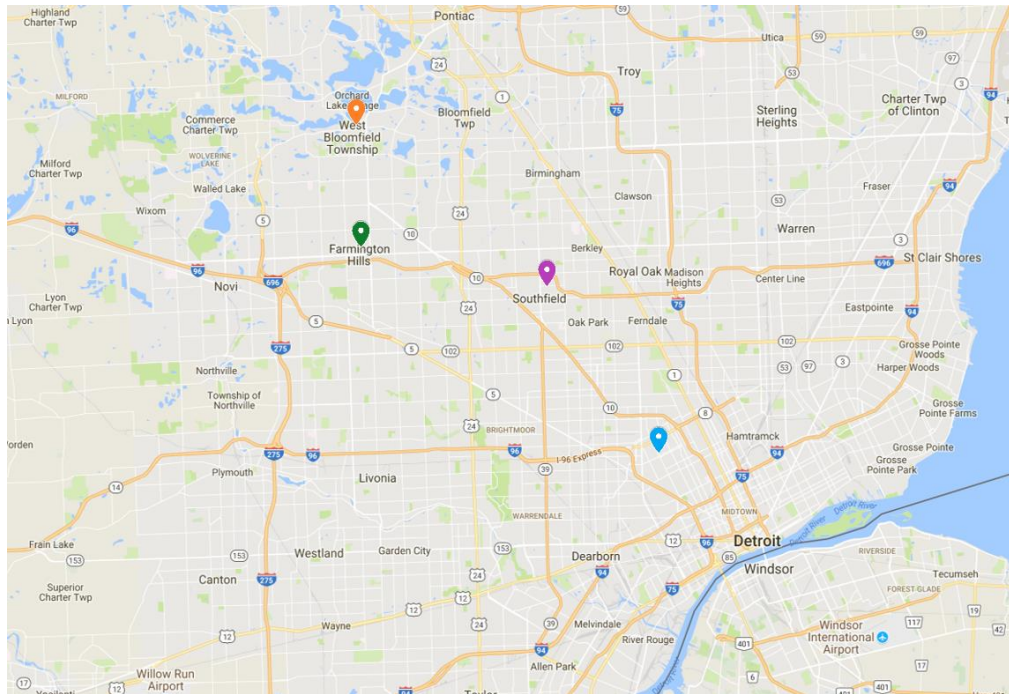


Figure 2. Map of Southeast Michigan with pinned geographic points of interest (Acton et al, 2017).

The Jewish population of Metro Detroit has undergone geographic shifts over the years with most of the oldest participants being born and raised in Northwest Detroit (blue pin on Figure 2), many of the baby boomers being raised in the Southfield area (purple), and the youngest participants being raised in Oakland County (green and orange). This migration of concentrated Jewish populations to the Northwestern suburbs began in the 1950's and 1960's.

As of 2018, there were 71,750 Jewish people living in Southeastern Michigan, making it the 26th largest Jewish population in the United States (Headaphol, 2018). Of this population, 80% live in Oakland County (which is where most of our participants currently live), regardless of whether or not they grew up in Detroit. From a religious perspective, 35% of Jewish people in Metro Detroit identify as Reform, followed by 31% who identify as “just Jewish,” 20%

Conservative, 9% Orthodox, and 5% are in other categories (Headaphol, 2018). Despite their modest representation in Metro Detroit, our sample does not include any Orthodox speakers.

From a linguistic standpoint, our participants (except for one British English speaker) all speak some form of Standard American English. Additionally, most of our speakers seem to be affected by the Northern Cities Vowel (NCS) shift to a considerable degree. The oldest speakers appear to be pre-shifted, the baby boomer generation are very shifted, and the trend of NCS speech diminishes gradually the younger a speaker gets (Acton et al., 2019).

3.2 The Participants of the Current Study

This study, like others (Benor, 2001, 2004; Bucholtz, 2001; Levon, 2006; Podesva, 2007; Podesva et al. 2015; Sclafani, 2009; among others), analyzes word-final /t/-release. The data for the analysis originated from two sociolinguistic interviews from the JLLSM project corpus. These interviews were conducted by Eric Acton in 2015 and 2016. He was in his mid-30s at the time of the interview. He is originally from Ohio and is not Jewish himself. It is important to mention that the participants had never met Dr. Acton before the interview. Each interview had a different participant, and both were Jewish women who were born in the Metro Detroit area in the late 1970's.

The first interview was conducted in 2015. The participant, who will be referred to as Jessica, works for a Reform Jewish organization. The interview was conducted at her office and was 58 minutes and 8 seconds in length. The second interview occurred in 2016 at the home of a Conservative Jewish woman, who will be referred to as Laura. This interview lasted for 1 hour, 27 minutes and 31 seconds. In both interviews, the participants had a lengthy period of spontaneous conversation with Dr. Acton. In the final 10 minutes or so of each interview,

however, each participant answered specific metalinguistic questions about their use of Jewish language (Appendix A), and they also read 62 words off of a wordlist (Appendix B). Wordlist data was collected as a way to measure certain vowels from each participant during read speech. The metalinguistic questions varied slightly in each interview, but the wordlist was read uniformly by each participant.

Both women were born and raised in Metro Detroit but spent a few years outside of the Inland North dialect region in their 20s for their post graduate studies. Both women are college educated and could be described as middle to upper-middle class.

3.3 Methods

Each interview was recorded and then transcribed in ELAN (2018). For the purpose of this study, tokens of word-final /t/ were isolated using the interview transcripts from the ELAN transcription. The transcript was printed out, and each instance of word-final /t/ was highlighted and transposed into a spreadsheet. This produced a total of 1791 tokens between the two interviews.

The spreadsheet data were then coded for various features. These features included whether the word-final /t/ was released, what sound directly preceded the /t/, what sound followed the /t/, the kind of morpheme of the word containing the word-final /t/, whether or not the /t/ immediately preceded a pause, the lexical frequency of the word ending in /t/, the topic, the stance, and the genre. (More details on each of these independent variables are presented below.)

After identifying all the words that ended in a /t/ sound, the following task was to listen to each interview and determine whether or not each word-final /t/ was “released.” Formally,

Levon (2006) defines consonant release as “a short burst of air following stop closure” (p. 187). The word-final /t/-release variant was initially coded on an impressionistic basis and it resulted in 106 tokens of /t/-release between the two interviews. As a native speaker of English, I found it very easy to determine whether or not a word-final /t/ was released except for instances where the following word began with a /t/ sound. In this case, it was hard to determine whether I was hearing a stop release at the end of a word, or the aspiration of a word-initial /t/. For this reason, 135 tokens of word-final /t/ were excluded from the sample because they were immediately preceding words that began with a /t/ sound.

Additionally, my impressionistic coding of word-final /t/-release was supplemented with a closer analysis in PRAAT to ensure accuracy. Following the methodological example of Levon (2006), a sample of 20 tokens were selected at random for inspection in PRAAT. On the spectrogram, a stop release would appear as “sharp spikes in the spectrogram” that look different than word-initial aspiration (Levon, 2006, p. 187). The closer look in PRAAT indicated the same results in every case as the impressionistic coding.

In coding the sounds that directly preceded and followed the /t/, the written transcripts of the interviews served as a guide and everything was coded using IPA symbols. If the word was *bet*, for instance, the “preceding sound” was coded as ε . If the speaker pronounced a sound in an atypical way, it had already been noted on the transcript, and it would have been coded with their actual pronunciation.

After some data analysis, it became clear that the sound immediately preceding the word-final /t/ needed to be scrutinized further. As such, I followed the work of Podesva et al. (2015) and created categories to code for. As in the aforementioned work, I looked for whether or not the preceding sound was a consonant and if so, whether it was an obstruent or a sonorant. The

preceding consonants in the sample were [f], [k], [l], [n], [p], [r], and [s]. The preceding obstruents were [f], [k], [p], and [s], and the preceding sonorant consonants were [l], [n], [r].

After looking at the preceding sound, coding was done for the sound that followed the word-final /t/. Again, the written transcript of the interview served as a guide and everything was coded using IPA—unless there was a long pause (impressionistically determined) or change of speaker. In that case, there was not a sound immediately following the /t/, so it was not coded for following sound. Additionally, as mentioned previously, 135 tokens were excluded if the following sound was a /t/.

In coding the type of morpheme, there were four categories of interest for which each word was classified: “monomorph” (words where the /t/ was part of a larger morpheme but not part of contraction or a Jewish word), contraction (*didn't*, *don't*, *can't*, etc.), past tense -ed (*liked*, *pumped*, etc.), and Jewish word (*shabbat*, *Sukkot*, etc.).

Next, a category called “pre-pause” was coded as an intonational phrase boundary. That is, if there was a change in speaker or a considerable pause or break in speech, the token was noted to be “pre-pause.” This pause in speech was coded on an impressionistic basis, so there is no cutoff in milliseconds for what would constitute a pause. However, 13 tokens were excluded because of unclear pause boundaries. This was often due to overlaps in speaker/interviewer speech or to filler words like *um* which were used by the speaker instead of a pause.

To code for lexical frequency, I followed methodology similar to that in Podesva et al.’s (2015) study of /t/-release among politicians. Similarly, I measured lexical frequency based on the speakers’ usage in their interviews, analyzing each speaker’s usage separately. The general American usage of any given word was not taken into account, since the goal was to get an

approximation of word frequency particular to each speaker. For example, the word “Detroit” was uttered 19 times in one interview and 16 times in the other, even though it’s probably not a frequent word in general, everyday American English. Continuing to follow the lead of Podesva et al. (2015), I then coded words as either “high frequency” or “low frequency.” High frequency words in this corpus were those that were uttered 10 times or more in the relevant interview.

When coding the data for topic, I first created a very specific list of topics based on what the interviewee was talking about at the time. These subjects included things like, “trip to Israel,” “growing up in Metro Detroit,” “her sister’s job,” etc. Since this is a paper about /t/-release as a potential Jewish feature, however, I widened the categories of topic to two: “Jewish” and “non-Jewish.” Simply put, if the speaker was talking about Jewish topics in any way, shape, or form during the utterance, it was coded as “Jewish.” If there was no reference to Jewish religion or culture during the utterance, it was coded as “non-Jewish.”

Later in the analysis, I felt that topic in Laura’s interview deserved a little more attention. Upon second inspection of that interview, I noticed that there were little pockets, or clusters of time where word-final /t/’s seemed to be getting released much more frequently than at other times. Because of this, I listened to the interview one more time in 5-minute increments. For each 5 minutes of the interview, I noted how many total word-final /t/’s there were and how many of those word-final /t/’s were released. I then calculated the total percentage of /t/-releases during the 5-minute timeframe. Then, from the interview transcript, I noted what the topic of conversation was during each 5-minute time frame. To define the topic, I just summarized the conversation into semi-specific categories like “September 11th,” “her children’s Jewish education,” etc. I then looked for topic patterns based on the amount of word-final /t/-releases at that time. For this section of analysis, I excluded the wordlist entirely as it was mere recitation

and was not related to any conversational topic. Additionally, conversational data from the first fifteen minutes of the interview was excluded in this section of the analysis.

In organizing the data according to stance, I first read the interview transcripts and tried to relay stance to the emotional state that the speaker seemed to have while they were talking. The stances that I accounted for were “positive, neutral, negative” and various emotional states such as “happy” and “sad.” This initial approach proved quite imprecise, so I attempted a different approach. The idea was to measure the amplitude of the carrier intonation phrase in PRAAT. If a person had higher amplitude, it could be said that they were more excited or emotional. Upon inspection of 20 instances of /t/-release and their amplitude, however, it seemed that no patterns were emerging between a potential emotional state, amplitude, and /t/-release. That is, word-final /t/’s were released in situations of both high and low amplitude, and I felt that I couldn’t reliably judge stance using this measurement.

As a last attempt to capture some sort of stance, I studied the methodology from Nycz (2018) where she looked at variation in vowel production among Canadians living in the United States. Nycz illustrates that if a speaker shows a clear affinity for a certain place, their vowels will tend toward the pronunciation that is prototypical in that region. In coding for stance, she included the variables “positive, negative and neutral” (p. 179). To be listed as “positive” or “negative,” there needed to be very clear language indicating positivity or negativity, such as “I loved it,” or “the worst place to be” (p. 179).

This is the type of coding for stance that has been adopted in this work. This study used “positive” and “neutral” as stance categories, and I have only labeled things as positive if the language surrounding it is very clearly positive. For instance:

POSITIVE: “And I loved Woodley, it was great.”

“He is the most incredible husband, he's the most devoted father.”

Everything else was coded as neutral because there was no overtly negative language in either interview.

Finally, a mixed-effects regression analysis was run in R (Bates et al., 2015; R Core Team 2012) for Laura’s interview. Such analysis was not conducted for Jessica’s interview because there was so little /t/-release data to work with (only four released tokens total in the conversational data). Laura, on the other hand, released 94 /t/’s in her interview, which provided enough data for such an analysis.

In this regression analysis on Laura’s interview, the factors considered were: following environment, preceding environment, morpheme type, frequency, and topic (Jewish or not) as possible fixed effects and including word as random effect. Because Laura released her word-final /t/ 100% of the time in the word-list speech, the word-list data were excluded from the modeling. Similarly, within the conversational speech, Laura never released her word-final /t/ where there was a following sibilant (74 tokens), where the /t/ was part of the *n’t* contraction (101 tokens) and where the /t/ was a past-tense suffix (nine tokens), so all such observations were excluded from the analysis—leaving a total of 828 observations that were analyzed for the models.

Chapter 4: Key Findings and Discussion

To understand the possible phonological constraints and indexical sociolinguistic meanings that word-final /t/-release has for these two speakers, this chapter will present the independent variables (/t/-release, time in interview, lexical frequency, preceding sound, following sound, type of morpheme, topic, stance) in the data that were analyzed for each speaker. Then, speakers' linguistic output will be compared to one another.

4.1 Interview 1---Jessica

As previously mentioned, Jessica was born in the Metro Detroit area in the late 1970's. She is college educated and works for a Reform Jewish organization in Metro Detroit. She grew up in Oakland County in Southeast Michigan and lives there currently, but she has spent several years outside of the state immediately after college. She is a native English speaker and is fluent in Hebrew.

Of the two speakers in this study, Jessica uses the word-final /t/-release variant the least by far. In fact, her interview, which was 58 minutes long, consisted of 626 tokens of word-final /t/, and she only released six of them. This is a release rate of less than 1%.

Despite the small numbers of /t/'s released here, some patterns did emerge as to when and possibly why Jessica produces the variant.

The discussion will start by highlighting the key factors that favor her production of word-final /t/-releases. For one thing, three out of the six instances (50%) of /t/-releases occurred in the first 15 minutes of the interview even though this timeframe only produced 32% of the tokens of word-final /t/. Additionally, five out of six (83%) of the /t/-release words were low frequency despite infrequent words only making up 26% of Jessica's tokens of word-final

/t/. Also, two out of six of the /t/'s released were words that Jessica had read from the wordlist. There were 11 word-final /t/'s in the wordlist in total.

From a phonetic standpoint, Jessica's production of word-final /t/-release is much more likely if the /t/ is following a consonant and preceding a pause. These favorable phonological environments are consistent with the findings in Benor (2001). Of the six instances of /t/-release in this interview, five of them occurred after a consonant (3 obstruents and 2 sonorants), and six out of six occurred before a pause in speech. Table 1 gives a visual representation of all of the phonological factors that were measured in this study and their percentage of /t/-release. This chart is based off of the chart in Podesva et al. (2015).

Table 1

Factors Influencing Rates of Word-Final /t/-Release for Jessica.

	n/N	%
Preceding sound		
Consonant	5/187	2.7
Obstruent	3/65	4.6
Sonorant consonant	2/122	1.6
Vowel	1/439	0.2
Following sound		
Pause	6/54	11.1
Vowel	0/183	0
Consonant	0/389	0
Morphological environment		
Monomorph	5/560	0.9
Past tense -ed	0/1	0
Jewish Word	0/8	0
Contraction	1/57	1.8
Lexical frequency		
Low	5/169	2.9
High	1/457	0.2

Adapted from "Constraints on the social meaning of released /t/: A production and perception study of U.S. politicians," by R. Podesva, J. Reynolds, P. Callier and J. Baptiste, 2015, *Language Variation and Change*, 27, p. 66. Copyright 2015 by Cambridge University Press.

Table 1 reiterates the most important factors surrounding Jessica's /t/-releases. She is most likely to produce a /t/-release after an obstruent consonant and before a pause. Additionally, her /t/'s are most likely to be released on low frequency words. Here's an example of a /t/-release from her interview that meet all of these criteria (Released /t/ is underlined and the word it appears in is bolded):

Jessica: You know, if you're from here, there's very strong ties, and very strong feelings. That's why no one before us really ever left.

This environment does not exclusively produce /t/-releases for Jessica, however. Consider the following example from her speech where she doesn't produce a /t/-release:

Interviewer: My dad stayed at home for about a year and a half when I was a kid, and it was really cool.

Jessica: It's the best.

In this example, Jessica says a word-final /t/ between an obstruent consonant and a pause. At seven instances in her speech, the word *best* has been coded as low frequency. Since this environment is identical to her ideal environment for producing /t/-releases, yet she does not release the /t/, the question arises as to what else might be at play in her selection of what variant to use.

4.1.2 Interpretation of Jessica's data. All things considered, it seems like on the rare occasion that Jessica uses the word-final /t/-release variable, it is during times where she is paying close attention to what she is saying. Put another way, when she uses /t/-release, she is

indexing something like thoughtfulness. There are a few different factors in the data that have led to this conclusion, and they will be examined in detail below.

For one thing, three out of her total of six word-final /t/-releases occurred in the first fifteen minutes of the interview. Inasmuch as speakers are thought to be a little more socially reserved in the first fifteen minutes of a sociolinguistic interview, the fact that Jessica expends half of her /t/-releases in the first fifteen minutes of a one-hour interview is somewhat telling. During this time, where she is potentially more self-conscious and thoughtful around the interviewer whom she has just met, half of her released /t/s occur, despite representing only about one-fourth of the entire duration of the interview.

Another element that points to the possibility of Jessica using /t/-release during careful speech is the fact that of the six tokens of word-final /t/-release, two of them were performed during her reading of the wordlist, out of a total of 11 possible sites in the word list. In other words, her rate of word-final /t/-release in the wordlist was 18%, compared with less than 1% for the interview as a whole. It's been shown that wordlist speech tends to be more calculated, formal and veering toward prestigious forms than that of conversational speech (e.g., Trudgill, 1974).

Given the data so far, five out of six of Jessica's tokens of word-final /t/-release have been during times in the interview where a person's speech is likely to be careful and thoughtful. What about the sixth instance of /t/-release in this interview? The following is an excerpt of the interview transcription with the sixth /t/-release. Please note that the conversation up to this point is about the various types of Jewish religious practices across the United States as they affect the Jewish organization that she works for.

Interviewer: How would you characterize this area, I mean the milieu here?

Jessica: Well, we happen to be a very large organization, ummmm (lip smack), I think it's it's a lot of very...**intelligent**, involved in their careers, involved in their children, and we are also one of the greatest contributors, not only in time and effort, but money, to the state of Israel.

While Jessica is beginning to characterize her workplace for the interviewer, she first answers with an indisputable fact about her work institution, which is that it's very large. She then pauses and says "ummmm" for 1.6 seconds. This is immediately followed by what transcribers call a "lip smack" (the lips coming together and producing an audible sound). She then says, "I think *it's it's*," in a hesitant manner, before offering her opinion on the people that make up the organization. These three elements taken together indicated that she was choosing her words very carefully. She seemed to want to make sure that she was representing her workplace accurately for the interviewer. Throughout the interview, the Jewish organization where she works seems to be a point of immense pride for her.

Certainly, there are phonetic and lexical factors at play here which seem to determine when a /t/ is more or less likely to be released by this speaker. The perfect environment for her seems to be a low frequency word, post-consonant, pre-pause type of situation. While all of the data together is a very important predictor as to how and when this variable is used, it doesn't fulfill the question as to why. As seen in previous paragraphs, the situations during which Jessica releases her /t/'s are potentially very telling from an indexical standpoint—it appears that she's being thoughtful as a speaker.

4.2 Interview 2---Laura

Laura was born in the late 1970's and self-identifies as a Conservative Jew. She is college educated and is in sales. Laura grew up in Oakland County in Southeast Michigan and lives there currently, but she spent four years out of state during graduate school. She has been to Israel on multiple occasions. She is a native English speaker and knows a little Yiddish and Hebrew and has a little spoken competence in Spanish and Ladino as well.

In Laura's interview, she uses the word-final /t/-release variant much more than Jessica. Laura's interview lasted for 1 hour and 27 minutes and consisted of 1,012 instances of word-final /t/. Of those 1,012 tokens, Laura released the /t/ on 94 occasions for a rate of 9.3% of word-final /t/-release, compared with less than 1% for Jessica. The next several paragraphs will explore the variables that influence the word-final /t/-releases.

Unlike Jessica, Laura releases a slightly higher percentage of her /t/'s after the 15-minute mark in the interview. Of the 122 tokens of word-final /t/ in the first 15 minutes, Laura releases 10 of them for an 8.2% release rate. After 15 minutes of speech, Laura released 84 of 889 word-final /t/'s for a 9.4% rate of release. Importantly, though, 12 of these 84 releases were on the wordlist. If wordlist data were excluded, Laura's release rate after the 15-minute mark would be 8.1%—nearly identical to her 0-15-minute rate.

For the matter of word frequency, Laura's interview consisted of 235 tokens of low frequency word-final /t/ words and 777 tokens that were high frequency. Of the 235 low frequency words, 43 of the /t/'s were released for a rate of 18.3%. This is far above the 9.3% general release rate in the interview. Of the 777 high frequency words, 52, or 6.7%, of the word-final /t/'s were released. So despite low frequency word tokens accounting for 23% of the words

with word-final /t/ in the corpus, they accounted for 45% of all /t/'s released in the interview. This finding is consistent with Podesva et al.'s (2015) study on /t/-release and politicians.

As for the phonological environment, of the 1,012 tokens of word-final /t/ in this interview, 703 of them were preceded by vowels and 309 were preceded by consonants. Of the 703 tokens of word-final /t/'s that were following vowels, 68 of them were released for a rate of 9.7%. Of the 309 /t/'s that were following consonants, 26 of them were released for a rate of 8.4%. Of the consonants, 11/26 were released following an obstruent ([s,] [k], [f]) and 15/26 were released following a sonorant [n], [r], [l].

The sound that follows the word-final /t/-releases in this interview is crucial in that the /t/-release usually isn't followed by a sound. Of the 94 word-final /t/-releases, 85 of them were coded as having no following sound because there was a significant pause or change of turns in the conversation. This means that 90% of the word-final /t/-releases in this interview were preceding a pause rather than another sound produced by the speaker. In total, there were 139 tokens of pre-pause /t/'s in the interview and of those, 84 were released for a 60% rate. This is consistent with Benor's (2001) finding that /t/-releases are favored in a "phrase final" position.

Some patterns also emerged in looking at the kind of morpheme where the word-final /t/-releases occurred. Laura's interview seemed to largely favor releases in "monomorphs" (words where the /t/ was part of a larger morpheme, but not part of contraction or a Jewish word). Of the 1,012 instances of word-final /t/, 892 were monomorphs. Of these 892 monomorphs, 90 were released for a total of around 10%. Interestingly (although too small of a data set to draw any hard conclusions), three of the word-final /t/-releases occurred on the eight Jewish words ending in /t/ in the interview for 37.5%. None of Laura's /t/-releases occurred on contractions or past tense suffixes.

Table 2*Factors influencing rates of word-final /t/-release for Laura*

	n/N	%
Preceding sound		
Consonant	26/309	8.4
Obstruent	11/125	8.8
Sonorant consonant	15/184	7.6
Vowel	68/703	9.7
Following sound		
Pause	84/139	60.4
Vowel	3/233	6.4
Consonant	7/640	2.7
Morphological environment		
Monomorph	90/893	10.1
Past tense -ed	0/9	0
Jewish Word	3/8	37.5
Contraction	1/102	1
Lexical frequency		
Low	42/235	17.8
High	52/777	6.7

Adapted from “Constraints on the social meaning of released /t/: A production and perception study of U.S. politicians,” by R. Podesva, J. Reynolds, P. Callier and J. Baptiste, 2015, *Language Variation and Change*, 27, p. 66. Copyright 2015 by Cambridge University Press.

Table 2 illustrates the major trends for Laura’s /t/-releases in this interview. Again, the linguistic factors that seem the most important for released /t/ are if the stop occurred in a pre-pause position, if the word was a Jewish word, if the word was low frequency, and if it was a monomorph.

Also of note, there were 12 items on the wordlist that were word-final /t/’s and Laura released 100% of them.

As far as topic goes, about 788 tokens of word-final /t/ occurred while Laura was talking about Jewish topics and 212 were during non-Jewish topics. Seventy-one (9%) of the released

/t/'s occurred during Jewish topics, and 11 (5.2%) occurred during non-Jewish topics (wordlist items have been excluded here because they do not contribute to topic in any way).

The last variable that the interview was coded for was stance. Furthermore, 606 tokens of word-final /t/ were coded as “neutral,” and 394 were coded as “positive.” At 53 tokens, Laura was more likely to release her /t/'s during a neutral stance for 8.7%. This is compared to 29, or 7.4%, during an overtly positive stance. This finding will be challenged in a paragraph to come, however, after I take a different, more careful look at Laura’s interview as her /t/-release relates to her stance on particular topics.

To investigate the robustness of these findings, a regression analysis was run for these data with a mixed effects model. As noted above, the model was run on conversational data only, and excludes environments with 0% /t/-release within the conversational data (preceding a sibilant, in *n't*, or as a past-tense suffix).

No model performed significantly better than the one with preceding environment, following environment, and whether or not the topic was “Jewish” as the fixed effects. Word was included as a random effect in all models tested. The results of this model are illustrated in Figure 3. Effects for following environment are as compared to having a pause after the /t/; effects for the preceding environment are as compared to having a vowel before the /t/.

Fixed effects:				
	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-0.8239	0.6053	-1.361	0.1735
Following non-sibilant cons	-5.3971	0.6974	-7.739	9.99e-15 ***
Following vowel	-5.8739	0.9509	-6.177	6.52e-10 ***
Preceding obstruent	1.5738	0.8502	1.851	0.0642 .
Preceding sonorant consonant	2.0780	0.8293	2.506	0.0122 *
Jewish topic - Yes	0.9999	0.4720	2.119	0.0341 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Random effects:				
Groups Name	Variance	Std.Dev.		
word (Intercept)	2.553	1.598		
Number of obs: 828, groups: word, 105				

Figure 3. Mixed-effects model predicting word-final /t/ pronunciation (released or not) as a function of preceding environment, following environment, and topic (Jewish or not).

The predictive model reinforces some of the main findings described above. First, /t/ is significantly more likely to be released when followed by a pause than by a non-sibilant consonant ($p < 0.001$) or a vowel ($p < 0.001$). This lines up with the discussion above, since Laura's favored environment for /t/-release is "pre-pause" where there is no following sound at all. Additionally, preceding vowels were significantly less likely ($p < 0.05$) than preceding sonorant consonants and marginally significantly less likely ($p = 0.06$) than obstruents to coincide with /t/-release. Lastly, Jewish topics were significantly more likely than non-Jewish topics to coincide with /t/-release ($p < 0.05$). Frequency did not turn out to be a significant predictor of /t/-release for Laura when these other factors were accounted for.

4.2.2 Interpretation of Laura’s data. Due to the wealth of data for Laura as compared to Jessica, it was more difficult to construct a possible explanation for her /t/-release pattern. Linguistic factors don’t seem to account for all of Laura’s variation in /t/-release, suggesting there is something socially driven about Laura’s use of the /t/-release variant.

To follow this thought, recall that the releases did not always seem evenly distributed throughout the interview. In other words, there were clusters of speech that included many instances of /t/-release and long stretches of time where this did not seem to be the case. Figure 4 below illustrates the peaks and valleys of released /t/ during 5-minute segments of the interview.

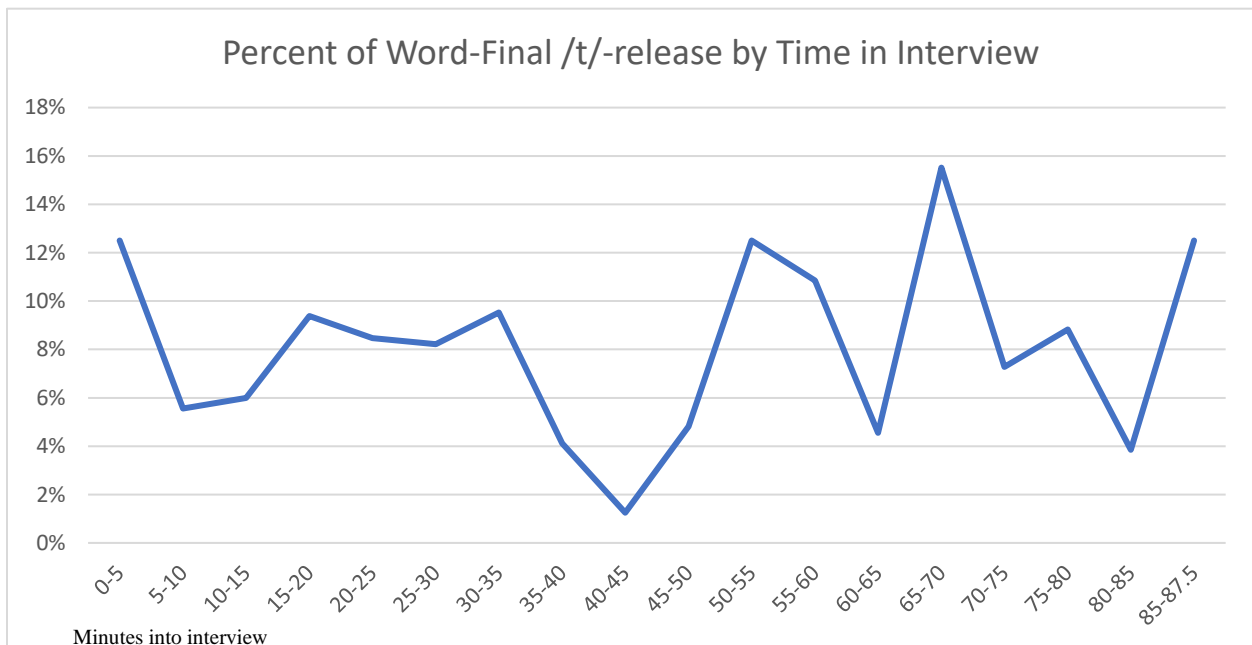


Figure 4. Percentage of /t/-release by time in Laura’s interview.

As noted in Chapter 3: Project and Methods, I listened to the interview again and coded for topic in 5-minute increments. I then examined the subject of conversation during the high and low points of /t/-release in the interview. Figure 5 below shows a graph of the primary topics of

conversation for each of the 5-minute segments in the interview as they ascend toward higher and higher rates of /t/-release. As previously mentioned, the 12 tokens of word-final /t/-release that occurred during the reading of the wordlist and the first 15 minutes of conversation have been excluded here.

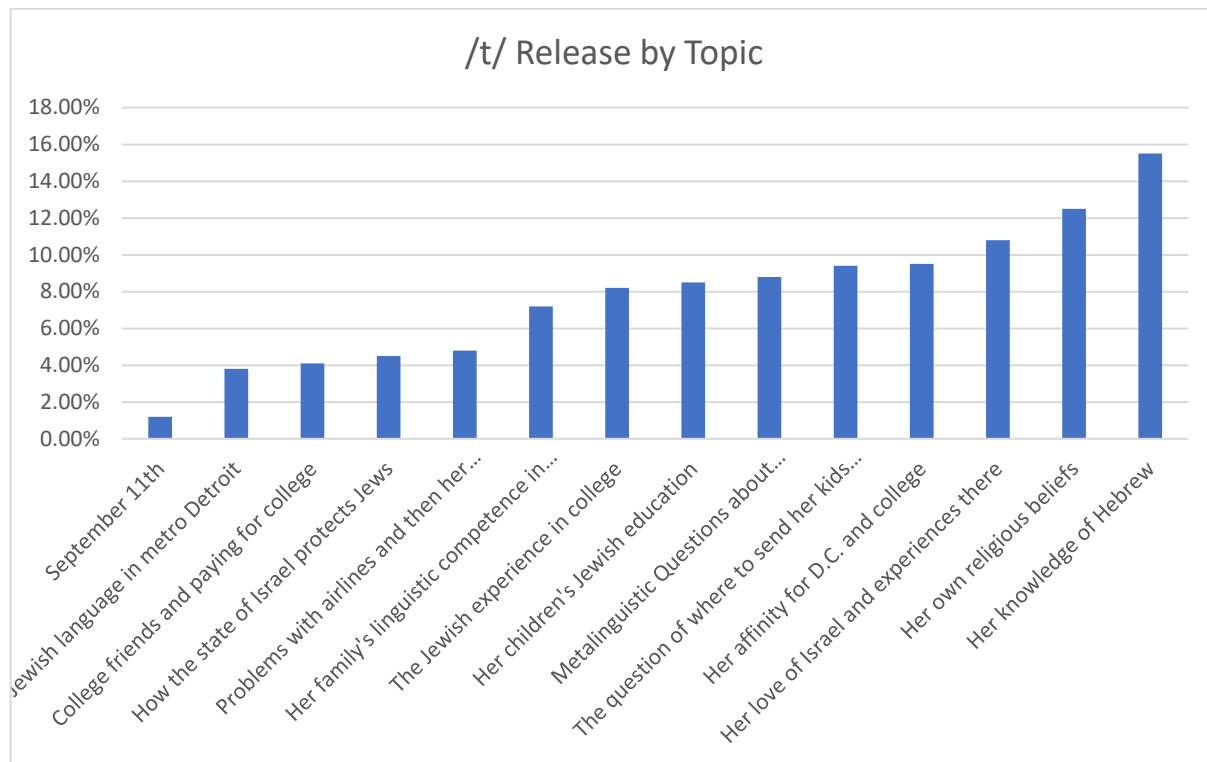


Figure 5. /t/-Release by topic in Laura's interview.

There were 14 topics overall and each indicates a 5-minute chunk of conversation between Laura and the interviewer. Below, I will provide a brief explanation of how I arrived at each category based on what was being discussed in the interview (note that the topics below are ordered from least /t/-release to most /t/-release):

- *September 11th*—Here, Laura and the interviewer were talking about their experiences on September 11, 2001. Laura was talking about walking around Washington, D.C., with

her roommate and just generally what a crazy day it was. She then went on to talk about the subsequent terror attacks on the London subway system a few months later.

- *Jewish Language in Metro Detroit*—In this section, Laura is answering the metalinguistic questions about Jewish language as in Appendix A. Additionally, she is talking about whether or not you can tell if someone is Jewish by how they talk. She says that she cannot, rather, she'd identify a Jewish person most accurately by last name. In this section, as opposed to the other section about metalinguistic questions, Laura is not talking about her own knowledge of Jewish languages.
- *College friends and paying for college*—In this section, Laura talks in general about the various activities that are available to college students (sororities, parties, studies, etc.). She then goes on to talk about how her parents prepaid for her college.
- *How the state of Israel protects Jews*—In this section, Laura talks about one trip to Israel in particular where she got to meet members of the Knesset (Israeli parliament). She goes on to say that Israel will protect Jews from all over the world, and as long as Israel exists, there will not be another Holocaust.
- *Problems with airlines and then her parent's faith practices*—Here, she talks about how her upcoming trip had a flight change that caused her tour group to come back a day later than originally planned. Then, the subject moved to her parents, and she said that they have become more religious through age and they have recently koshered their kitchen.
- *Her family's linguistic competence in Yiddish, Greek, and Ladino*—Laura describes the various languages that members of her family speak and how good they are at each language.

- *The Jewish experience in college*—Laura talks about how her mother always wanted her to participate in Jewish events while she was in college, but that just was not her thing. She had a Jewish boyfriend and many Jewish friends, but she preferred a less organized social calendar. She also mentions that she had many non-Jewish friends as well.
- *Her children's Jewish education*—In this section, Laura talks about the importance of raising Jewish children with Jewish traditions. She then goes on to talk specifically about her daughter's impressive knowledge of and enthusiasm for Judaism.
- *Metalinguistic questions about Yiddish/Hebrew expressions*—In this section, Laura displays her own knowledge and everyday usage of Yiddish and Hebrew by giving examples of certain words and phrases to the interviewer.
- *The question of where to send her kids to school*—In this section, Laura expresses that based on where she lives, she has two choices as to what school to send her kids to. She finds it to be a hard decision to make and she goes over the potential advantages and disadvantages that each school will have on her kids' education and social life. She also talks about her experience as a student in the high school that she attended. Her own experiences are a driving factor for this decision about where to send her kids.
- *Her affinity for D.C. and college*—Here, Laura talks about how much she enjoyed living in D.C. at one point in her life. She then goes on to talk about how Detroit is her home, and she would not want to be anywhere else to raise her family. Finally, she talks about how much she loved college. When asked if she enjoyed college, she said, "Loved it. Best time of my life...best time of my life."
- *Her love of Israel and experiences there*—This section details another of Laura's trips to Israel. As opposed to when she was previously talking about her experiences as an

airline customer, this time, she speaks of a trip where she went with her college boyfriend and they went to places that normal tourists would not go to. On this trip, she developed a very strong connection with Israel as more than just a tourist.

- *Her own religious beliefs*—Here, Laura gives the details of her own Jewish faith and talks about her role in the Metro Detroit Jewish community. She also talks again about Israel and how she used to go to the Israeli embassy all the time: “I loved **that** (/t/-release). I also have very strong ties to Israel.”
- *Her knowledge of Hebrew*—During the first part of this portion of the conversation, Laura talks about the sad stories that her grandparents have shared with her regarding the Holocaust. She then goes on to detail her current and past levels of knowledge of Hebrew. This is the section where Laura has a high percentage of word-final /t/-releases. It must be noted that Laura does not release them when recounting the stories of her grandparents. Rather, she uses a lot of /t/-release when talking about her knowledge of Hebrew.

By going through each of these topics in detail, I hope to have shown something that was hard to show with a simple category label. That is, the more personally enthusiastic that Laura seemed to be about the topic at hand, the more that Laura tended to release her /t/'s. By “personally enthusiastic,” I mean that Laura seems engaged, happy, upbeat, and excited by what she’s discussing—and these topics are all important to her on some personal level. Of course, these notions were created using my perceptions as a listener, but I hope to provide specific evidence of enthusiasm below, in addition to the topic breakdowns above.

Additionally, this analysis is different than my initial coding for stance. When I measured “positive” and “neutral” stance for Laura, I was looking for keywords like “love,” and

“happy” that might appear around a word-final /t/. In the initial stance analysis, Laura seems to slightly favor /t/-release during a neutral stance. All and all, I came to realize that the initial analysis for stance was critically imprecise and that more detailed work needed to be done.

The current analysis attempts to go a bit deeper than my initial analysis of stance where I looked simply at what words appear around the /t/. Here, a more careful and in-depth analysis has been done to account for the topic of conversation and other clues about Laura’s preferences that have led me to believe that when she releases a /t/, it’s often an indication that she is enthusiastic about what she’s talking about.

Admittedly, this analysis is somewhat impressionistic, as it is hard to code for a factor like “enthusiasm.” In spite of this, patterns do seem to emerge in the detailed explanations of topics associated with rate of /t/-release. It’s, of course, not perfectly clear in every example, but the evidence is compelling nonetheless. In the bottom four topics for percentage of /t/-release, she seems to be talking about impersonal experiences that she is not enthusiastic about. The events of September 11th, the general mechanics of Jewish language in Detroit, how her parents paid for her college, and the role of Israel in the world were presented very impersonally and unemotionally by Laura (impressionistically determined). However, in the top four topics for /t/-release, you can see that perhaps Laura’s personal enthusiasm causes a shift in her conversational style on the word-final /t/-release variable. These topics included how much she loved D.C. and college, her emotional connection to Israel, her own religious beliefs, and her knowledge of Hebrew. Her discussion of these topics is much more personal than her descriptions of people and events in the lesser /t/-released sections. Since these topics are more personal, she is possibly more apt to be enthusiastic about them.

To see how this plays out in real conversation, consider the following example from the section with the highest release of /t/'s where Laura is talking about her knowledge of Hebrew:

Laura: When you don't use it, you lose **it**.

Interviewer: So you would say, like you speak a little, understand a little Hebrew.

Do you read any or understand any?

Laura: Oh my god, reading is so hard. (Laughter). Reading's the **hardest**. You know, uh, words here and there for sure I can pull **out**. Um, understanding here and there I can pick it **out**.

In this segment, Laura laughs, and the quality of her voice is very positive and enthusiastic (however one would measure that). In general, she seems to really love Hebrew and be excited about it. Earlier in the interview, for instance, Laura talks happily about her daughter's knowledge state with the language:

Laura: My best friend was in town from Florida the other day an' she's like (to Laura's daughter), "Sing me a song." She sang the Hatikvah, which is the Israeli national anthem. (Laughter) (Pause) (More laughter). Like, that's what she goes around singing..."

In this segment of conversation, Laura seems very proud to share the story of her daughter's voluntary singing of the Israeli national anthem (she previously mentions that her daughter does sing it in Hebrew). Laura laughs a lot and is proud of the anecdote. She seems very eager to talk in general about her daughter's knowledge of Hebrew, as it comes up at least three more times in the interview.

So when Laura talks about her own knowledge of Hebrew, she's understandably enthusiastic and she releases many /t/'s in the process.

Another example of her high percentage /t/-release segments occurs when she is talking about her own religious beliefs. Once again, she takes on an excited tone when speaking of this issue:

Laura: I'm definitely more of, like, a **Zionist**. Um, my political views are very tied to, as I see them, to Judaism and to the state of Israel...I wouldn't call myself observant or Orthodox, or anything like **that**.

Upon first inspection, one may think that the /t/-releases above are purely phonologically driven because they all occur before pauses (represented above with periods). In part, this is true. At a 60% rate, Laura does favor /t/-releases when a pause follows the /t/. Despite this pattern, there are many pauses in the interview where /t/-releases do not occur. Consider the following conversation between Laura and the interviewer about the events of September 11th:

Laura: 'Cause they had just gone into the first building and I was like, "Do I wake up my roommate? Do I not?"

In this passage, there are two opportunities for pre-pause /t/-releases (pauses are represented here with question marks), but Laura does not use the variant. In fact, in the five minutes where they are discussing September 11th, there are the least /t/-releases in the entire interview in both percentage (1.2%) and total instances (1). This is not surprising considering that Laura may favor /t/-release when she is talking about subjects that she's enthusiastic about. Like most people, she takes on a somber tone when talking about September 11th, and her /t/-release rate follows suit.

In the case of Laura, then, her /t/-release seems to be driven at least in part by her emotions or stances that she is expressing in discussing a given topic. Her word-final /t/-release rates seem to mirror some enthusiasm toward what she is talking about.

4.3 Comparing Jessica and Laura's /t/-Release Patterns

This section will highlight the phonological factors that are at play in Jessica and Laura's rate of /t/-release and will show how these environments compare to previous studies. After looking at that, the possible indexical meanings of /t/-release for Jessica and Laura will be revisited.

Phonology clearly plays a role in both women's /t/-releases. In this study, a pre-pause environment is favored by both of our speakers for /t/-release. This finding is consistent with Benor's (2001) study on /t/-release in a Jewish community.

Benor (2001), Levon (2006) Podesva (2007), and Podesva et al. (2015) find that /t/-release is more likely after a consonant than a vowel. This is consistent with our data on Jessica, who in the conversational data only releases /t/ post-consonantly. It is also true that Laura favors a post-consonant release, but only when other factors are taken into account. When all of her conversational data are included, she actually releases /t/ at a slightly higher rate post-vocally (8.4%) than post-consonantly (7.8%). This speaker-to-speaker variation only adds to the idea that /t/-release is not completely phonologically determined. Rather, it is in part a matter of style.

As such, when the word-final /t/-release data for these two speakers is analyzed, it mirrors Eckert's (2017) claim about how everyone has their own personal style, whether it be how they dress, or what linguistic variables they use and when. It is reasonable to predict that Jessica and Laura's use of /t/-release would be similar because they are both college-educated, Jewish

women from Metro Detroit, who were born only two years apart. This just is not the case, though.

From Jessica's interview, we can see that word-final /t/-release does not seem to be a big part of her style at all, with only four tokens outside of the word list in nearly an hour of speech. As noted above, the variant comes out when she is paying close attention to what she's saying. Perhaps she wants to be perceived as pensive. In fact, in Jessica's interview, she offers some insight into why she may speak the way that she does:

Jessica: Before I started graduate school, a rabbi that I knew—of blessed memory—helped me kind of clean up my speech, so to speak, and so, I think it's really important to, um, take your time, and choose your words, and you know, you say “like” and “you know” and all the terrible things that when you talk to a teenager that you want to rip your face off...

In this passage, Jessica explains that her speech has been “cleaned up” from some former version. She also emphasizes the importance of “choosing your words.” Though she seldom uses /t/-release, it shows up when she's speaking carefully and only when she's speaking carefully, and so it may be one tool in her repertoire for indexing thoughtfulness and the kind of “cleaned up speech” that she values. Whether her /t/-released, careful speech is intentional or not is a question for future thought.

In the analysis of Laura's speech, I don't think that it's careful speech that is driving her to use /t/-release. Rather, it seems that Laura does, indeed, use /t/-release as a stylistic variant (evidenced most simply by the fact that it is used in various parts of the interview independently

from phonological ease or patterning) that indicates her level of enthusiasm toward particular topics.

Both Jessica and Laura do seem to use /t/-release in a way that indexes some trait about their style. For Jessica, it's thinking before speaking, and for Laura it's her enthusiasm toward whatever topic she happens to be discussing. Since the interview is a sample of speech from a sociolinguistic interview with someone that the speakers had not met before, this may only be one way in which they use the word-final /t/-release variant. These findings are just one part of the speaker's overall linguistic repertoire and style.

Chapter 5: Conclusion, Limitations and Further Questions

5.1 Conclusion

This study investigates /t/-release in order to better understand the notion of linguistic style. Specifically, what are the driving forces in choosing one form of a variable over another? The current study has been able to reinforce some notions about what phonological environments are most favored for the released /t/. This study, however, reveals clear stylistic differences between two demographically similar speakers and between those speakers and speakers in previous research on this variable in other Jewish communities. The unique ways in which Jessica and Laura use /t/-release offer a deeper look into the notion of variation in general.

To aid in the understanding of the potential uses of word-final /t/-release, much work can be referenced in sociolinguistic variationist research. In the early days of the field, scholars, such as William Labov (1962; 1966), investigated factors like social class to see how linguistic variables were used in different social environments. Many other contributions have followed. Bell (1984), for instance, asserted that one's style changes depending on audience. Later, Eckert (1989) showed that adolescent group association contributed to feature usage. Later still, Benor (2009) characterized a Jewish American Repertoire.

The current study has hoped to contribute to this existing body of work in variationist studies by using the familiar variable of /t/-release, but looking at it in a new way—in examining a comparison of two speakers whose social factors are very similar to one another. The speakers are both Jewish women, two years apart in age, and of the same social class and education level. They also both grew up in Southeast Michigan. The question, then, arises as to what accounts for the differences in their speech? After all, they certainly use the /t/-release variant in different

ways. As seen, Jessica hardly ever releases her word-final /t/'s. Laura, on the other hand, does so quite a bit more than Jessica. Are there phonological factors at play? What else might be driving their individualized usages?

To answer these questions, a very close analysis was done of data from the sociolinguistic interviews for which each woman was a participant, accounting for every word-final /t/.

The data showed that with the word-final /t/-release variable, a variant can have favored phonological environments, such as occurring after a consonant and before a pause. The pre-pause favored /t/-release environment is consistent with Benor (2001) and Podesva et al. (2015) and the post-consonant environment is consistent with Levon (2006) in addition to the aforementioned authors.

In addition to phonological factors, word-final /t/-release can be used with varying frequency and purpose among speakers. In other studies, the /t/-release variant has been said to index anything from Jewish learnedness and authority (Benor, 2001), to nerdiness (Bucholtz, 1999), to articulateness (Podesva et al., 2015), and more. The current study gives evidence that /t/-release may also be used to index thoughtfulness and enthusiasm.

Interestingly, in the other studies on /t/-release as a feature in Jewish communities (Benor, 2001; Levon, 2006), it would appear that /t/-release and Jewishness are interconnected. Levon (2006) finds evidence that /t/-release and Reform identity are linked in that the speaker who most wants to assert his "Reform identity" is the biggest user of /t/-release. In Benor's (2001) study on Jewish students in California, she provides compelling evidence that /t/-release is being used (among other things) to assert one's knowledge of Jewish texts. In her study, the more a person knows (or presents themselves as knowing) about religious topics, the more they

are apt to use /t/-release. In this study, Jessica and Laura's word-final /t/-release doesn't follow these patterns.

For example, Laura identifies as Conservative and Jessica as Reform. Unlike the Levon (2006) study, the speaker who shows a proud affiliation for her Reform identity is a person who also rarely releases her /t/'s. Additionally, Jessica (who is employed by a Jewish organization) has arguably more knowledge of Jewish scripture than Laura. If /t/-release were consistently used within the Jewish community to assert one's Jewish learnedness, then Jessica would use the feature much more than Laura. This simply is not the case.

Instead, as we saw in Chapter 4, Jessica releases her /t/'s during thoughtful, careful speech. Laura, on the other hand, seems to use the variant when she is enthusiastic about what she's talking about.

The various examples of /t/-release usage beg the question of whether this variant has any universal social usages. Seemingly, it does not. In fact, when I told a fellow teacher that I was writing this paper, she told me that she releases her /t/'s around her artist friends because it's just something that they all do. She asserted that she just wants to sound more "artsy." I suppose we can add "artsy" to the growing indexical field of /t/-release.

In addition to contributing more information to this variant's ballooning indexical field, this study suggests that linguistic features have gradations in terms of how variable they are in a speech community or demographic group. Some may have fairly uniform usage within such groups. Others—such as /t/-release—may show much wider variation.

This all makes the task of a sociolinguist seem quite daunting. To ascertain people's potential intentions in their use of specific language seems to be an insurmountable task. As this

study shows, it is possible that certain linguistic features (perhaps all?) are left up to the individual to use or not. After all, it is clear from this study that geography, age, education, class, gender, and religion do not fully determine the use of word-final /t/-release. Also, aside from phonology, the social use of this feature seems to be different for each of these women and for all other studies of word-final /t/-release. This feature does not seem to have a fixed social meaning. Maybe no features do.

There are few things that one can know for sure after a study like this. One thing, though, is that the way people talk—the things that they choose to say, the words that they use, the morphemes, and their phonetic realizations—is a window into their identity. When you hear a person talk, you might be able to tell where they are from, what they do for a living, who they admire, what they're proud of, what they care about, and more. To understand social, linguistic variables is to understand a whole human.

5.2 Limitations of This Study and Questions for Future Research

In this section, I will outline the limitations of this study and discuss some questions that I developed while writing about my research, that may help to inform other similar projects.

As with any study, more data would always be helpful. It would have been extremely nice to have more speakers in the age group so that the word-final /t/ variable could be seen in different environments and with potentially different indices. It would be very valuable, for instance, to analyze a speaker who shares most demographic traits with the speakers in the present study but who practices Orthodox Judaism. More speakers can always enrich an analysis.

In addition to having more speakers, it also would have been interesting to have more than one interviewer talk to our participants on different occasions. It is quite possible that the rates of /t/-release for these speakers vary wildly depending on who they're talking to. For instance, both women reported to some degree that they would use certain Jewish words with Jewish people and other words with non-Jewish people. For instance, the interviewer asks Jessica about what word she would use to describe the place one goes for Jewish religious services. Jessica at first uses *shul*. This is his follow-up question:

Interviewer: What if you were talking to a non-Jewish friend?

Jessica: I wouldn't use *shul*, 'cause they probably wouldn't understand what it is.

Laura: If I'm talking to somebody who's Jewish, I'll call it a *shul*. If I'm talking to somebody who's not Jewish, I'll probably say *synagogue*.

In this case, the interviewer was not Jewish, and he identified himself as such. So if /t/-release is indeed a feature used in the Jewish community (Benor, 2001, 2004; Levon, 2006), it is entirely possible that the way that these speakers use it differently depending on whether or not they are speaking with another Jewish person. For our purpose, however, much information can still be drawn about the stylistic use of the variant in a conversation with a non-Jewish person.

Along the same vein, it would be interesting to explore /t/-release as it related to Jewish words. In Laura's interview, she uses eight Jewish words that end in /t/ and she releases the /t/ on three of them. Does this have to do with the word's Yiddish/Hebrew pronunciation? Or is there some social factor involved?

Also adding to this wish list, it's always interesting in this type of project to include a perception study and analysis. Much like the Podesva et al. (2015) study, I'd love to have one group of people listen to the speaker without hearing /t/-release and another group listen with released /t/'s. Then, the listeners could judge the speaker on various factors like articulateness, thoughtfulness, religiousness, enthusiasm etc.

Finally, if /t/-release can be used to index enthusiasm—as I have claimed in this paper—then there needs to be some way to identify enthusiasm in speech. Perhaps it has to do with amplitude, or the rate of speech?

Despite some lingering questions, this study has aimed to contribute to an important body of work in variationist sociolinguistics. Jessica and Laura have helped to show that despite very similar backgrounds and demographics, one's speech is not cookie-cutter—it's a window into an individual.

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APPENDICES

Appendix A: Linguistic Questionnaire

Jewish Life and Language in Southeast Michigan (JLLSM) – Linguistic Questionnaire

1. Open-ended questions on vocabulary items

- a. What do/did you call your grandmother? _____
- b. What do/did you call your grandfather? _____
- c. What do/did you call your mother? _____
- d. What do/did you call your father? _____
- e. What do/did you call your aunt/uncle? _____
- f. When you are talking about your relatives, do you call them ‘my relatives’ or do you call them something else? If something else, what word/phrase do you use?

- g. What do you call the belly button when talking to a child?

- h. What do you call somebody’s bottom when talking to a child?

- i. What do you call somebody’s head when talking to a child?

2. Sentence Structure

In each question there are two options for how to say something. Can you tell me which of these you would use? (You can pick more than one.)

(i) Would you use _____ phrase?

(ii) If YES: if you had to guess, how many times out of 10 would you phrase it this way as opposed to others?

Example: a. This shed needs to be painted. NO YES 3 times out of 10

b. This shed needs painting. NO YES 7 times out of 10

(1)

a. Are you coming to our house for dinner? NO YES _____ times out of 10

b. Are you coming to us for dinner? NO YES _____ times out of 10

(2)

a. She stays at our house when she comes to visit. NO YES _____ times out of 10

b. She stays by us when she comes to visit. NO YES _____ times out of
10

(3)

a. I'm living here 10 years already. NO YES _____ times out of
10

b. I've been living here 10 years already. NO YES _____ times out of
10

(4)

a. Do you want I should call him? NO YES _____ times out of
10

b. Do you want me to call him? NO YES _____ times out of
10

(5)

a. He spoke like a child! NO YES _____ times out of
10

b. Like a child he spoke! NO YES _____ times out of
10

Appendix B: Jewish Life and Language in Southeast Michigan Interview Wordlist

Little	Button	Mary	Kit	Fell	Weren't
Dope	Tall	Pull	On	Tea	Pan
Feel	Judge	Spout	Loud	Chair	Jam
Detroit	Jam	Pet	Caught	Top	Off
Boat	Spite	Oral	Dogs	Orange	Jump
Will	Which	Nice	Tap	Corridor	Cheer
Tip	Pawn	Lied	Merry	You	Housing
Law	Food	Hoarse	Choral	Keep	Step
Pool	Cut	Fill	Pup	Horse	Marry
Soup	Pat	Police	Get	Gym	Cot
Bunch	Him				