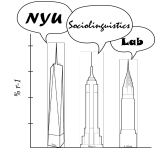




# Raising THOUGHTS about /r/:

## The interaction of THOUGHT-raising with following /r/

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### Lexical Sets

Obligatory following /r/	SORREL
Variable following /r/	
When Consonantal	SOURCE-C
When Vocalic	SOURCE-V
All other THOUGHT vowels	SAUCE

### Introduction

- Even though raised THOUGHT and *r*-vocalization are two of the signature features of New York City English (NYCE), recent acoustical studies of THOUGHT-raising have systematically excluded all tokens where the vowel is followed by /r/ (Becker 2010, 2014; Coggshall and Becker 2010; Wong 2015; Newlin-Lukowicz 2015, but see Newman 2014).
- The basis for the exclusion of SOURCE tokens is the finding in Bond (1976) that a following /r/ lowers the F1 of /ɔ/, i.e. raises the vowel.
- In the present study, we examine the behavior of THOUGHT according to following environment: whether obligatory /r/ (SORREL), variably consonantal-*r* (SOURCE-C), variably vocalic-*r* (SOURCE V), or a consonant other than /r/ (SAUCE).
- An immediate question is whether the vowel in SOURCE-V is the same as the vowel in SOURCE-C (and SORREL).

### Biography

#### Ruth Bader Ginsburg

- Born in 1933 in Brooklyn
- Lower-middle or middle-middle class upbringing
- Attended Cornell, Harvard, Columbia
- Lived in New York until she was 47
- Moved to Washington, D.C. in 1980 when she was named as a judge on the First Circuit Court
- Named to the US Supreme Court in 1993



### Data Collection

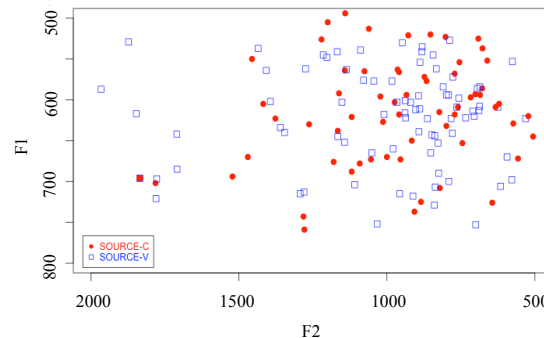
- Data was collected from Ginsburg's appearances as a Lawyer before the US Supreme Court in the 1970s and from her time as a Justice starting in 1993.
- They consist of her participation in oral arguments, first as Lawyer and later as Justice, and her reading of majority opinions that she authored as a Justice.
- The data comes from the Oyez Project ([www.oyez.org](http://www.oyez.org)), a multimedia archive devoted to the US Supreme Court.
- In all, our dataset consists of 1,422 THOUGHT tokens.

### Our Previous Findings (Shapp, LaFave, and Singler 2014)

- Ginsburg produced lower rates of raised THOUGHT as a Lawyer than as a Justice. We interpret this as accommodation towards the members of the Court.
- She produced higher rates of *r*-vocalization in the 2000s than in the 1990s or in the 1970s.
- We posit two mutually exclusive explanations for her increasing vernacularity in later years: (i) diminution of linguistic capital, or (ii) having reached the pinnacle of American society, she no longer needs to alter her speech to maintain her status.

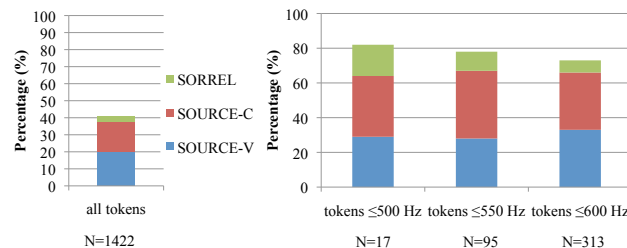
THOUGHT F1 and F2 are the same for vocalic-*r* and consonantal-*r*

Vowel Plot of All Tokens of the Word COURT



Above, we plot F1 and F2 for Ginsburg's tokens of the word COURT (N=153). The vowels followed by vocalic-*r* and those followed by consonantal-*r* occupy the same space and do not differ from each other. The F1 mean for both categories is 624Hz, and the F2 mean is 1013Hz when vocalic-*r* follows and 1051 when it's consonantal-*r*. Whether the following /r/ is realized or not, it's the same vowel.

### Following /r/ among the 'Super-Raised' Tokens

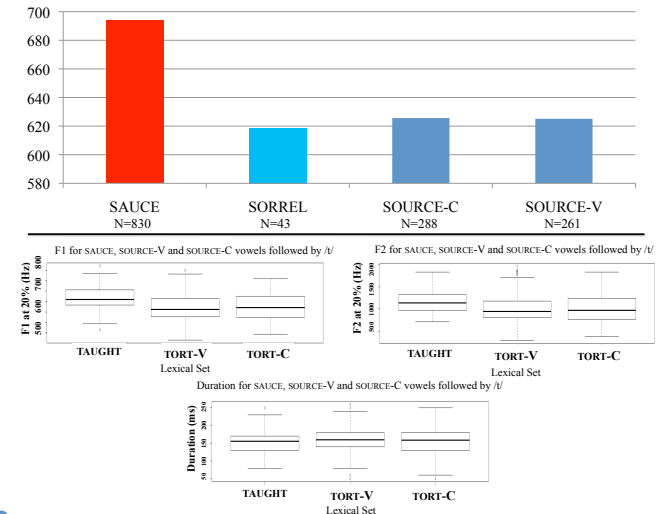


- Labov, Ash, and Boberg (2006) set 700Hz for F1 as the cutoff point for THOUGHT-raising. Here we examine what we call "super-raised" tokens, which have an F1 substantially lower than the cutoff point, to see the extent to which following /r/ is represented. We use three different cutoff points, 600, 550, and 500Hz.
- In the data set as a whole, the three types of following /r/ account for less than half of all tokens. However, they predominate among super-raised tokens, with the percentage growing as the cutoff point grows more restrictive, such that 83% of all tokens under 500Hz are some form of following /r/.
- Because raised THOUGHT and vocalic-*r* (SOURCE-V) are both vernacular features, it is to be expected that they would pattern together. But in fact, consonantal-*r* (SOURCE-C) has a higher rate of super-raising than does vocalic-*r*.

THOUGHT F1 is the same for variable and obligatory following /r/

More evidence that THOUGHT F1 is the same for vocalic-*r* and consonantal-*r*

Avg. F1 by Following Environment



- In comparing SAUCE, SOURCE-C, and SOURCE-V, we isolated THOUGHT tokens of the shape ...V(r)C... where the final consonant is tautosyllabic, e.g. *taught*, *tort*.
- F1 is sig. different between TAUGHT and TORT-V and between TAUGHT and TORT-C
  - F2 is sig. different between TAUGHT and TORT-V, but not TAUGHT and TORT-C
  - Duration is not sig. different for TAUGHT, TORT-C and TORT-V
  - TORT-C and TORT-V do not show up as being different in F1, F2, or duration
  - TAUGHT and TORT differences are consistent with Labov, Yaeger and Steiner (1972).

### Conclusions

If following /r/ is present in the input, the THOUGHT vowel will reflect it in the output.

- SOURCE-V patterns with SOURCE-C and SORREL, not with SAUCE
- Following /r/—whether SOURCE-V, SOURCE-C, or SORREL—lowers THOUGHT's F1.
- We have focused on phonetic explanations. Are there socially motivated ones? For Ruth Bader Ginsburg at the Supreme Court, apparently not.
- True, for SOURCE-V tokens the difference in THOUGHT F1 between Ginsburg's Lawyer years and her Justice years is significant, with Lawyer tokens having higher F1's, but this finding simply parallels the results for the data set as a whole; it's not special.
- Use of vernacular features (even stigmatized ones) in a formal setting can serve as
  - (1) marked code, endowing an utterance with special force, or
  - (2) a friendly gesture.
- We found **no evidence** of this among "super-raised" tokens: following SOURCE-C tokens actually occur at a greater rate than following SOURCE-V ones. Also, among super-raised tokens, regardless of following environment, no particular stylistic element emerges.
- Ginsburg does not use raised THOUGHT and vocalic-*r* to do (1) or (2) at the Supreme Court.