

New England Borderlands: A New Investigation of the East–West Boundary

Thomas Leddy-Cecere, Kenneth Baclawski, Jr., Nacole Walker and James Stanford*

1 Introduction

In the monumental *Linguistic Atlas of New England* (henceforth *LANE*) (1939–43), Hans Kurath examined the dialects of New England with rigor and detail, and he identified a number of subdivisions within the dialect region. His principal distinction, the “Kurath Line,” consists of an isogloss bundle separating Eastern and Western New England. The Kurath Line is envisioned along the spine of Vermont’s Green Mountains, roughly down the center of the state. It then continues south through western Massachusetts and Connecticut (Figure 1). Carver’s lexical analysis of data from the *Dictionary of American Regional English* (*DARE*) confirmed the location of this boundary (1987:31). Since that time, however, only a few localized studies have conducted regional dialectology in New Hampshire and Vermont, and the contemporary status of the Kurath Line has remained understudied.

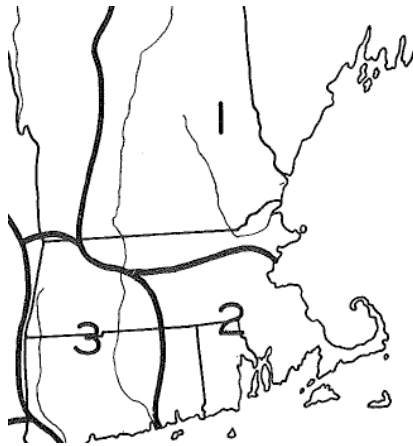


Figure 1: Kurath’s boundary between East and West New England (Kurath 1949:Fig. 3).

The Atlas of North American English (Labov, Ash & Boberg 2006) (henceforth *ANAE*) draws a similar dialect boundary between Eastern and Western New England along the Vermont/New Hampshire border. There are, however, no *ANAE* data points along the East–West boundary itself because *ANAE* focuses on larger cities; in Vermont and New Hampshire, the only urban areas large enough to be included in *ANAE* are clustered in northwestern Vermont and southeastern New Hampshire, leaving the intervening area a blank. This leaves a gap in contemporary understanding of the transition zone between two major US dialect regions, a dearth of knowledge felt all the more acutely for the fact that such “borderlands” are key places to explore dialect change and sociolinguistic identity (Fought 2008, Johnstone 2004, Chambers & Trudgill 1998). In fact, *ANAE*

* Fieldwork and initial analyses were conducted by James Stanford’s dialectology class at Dartmouth College during spring 2010: Kenneth Baclawski, Sara Brennan, Kelsey Byrne, Breven D’Angelo, Donna Dei-Baning, Jacquelyn de la Torre, Cindy Guo, Thomas Leddy-Cecere, Amanda Lewis, John Merrill, Leah Nicolich-Henkin, Jillian Tetrick, and Nacole Walker. We are grateful for assistance and suggestions from Naomi Nagy, Sarah Villard, William Labov, Aaron Dinkin, Gregory Madan, and the NWAV 39 audience. We also express our gratitude to Lucinda Hall for her cartographic expertise (Dartmouth College Evans Map Room). Special thanks to the following senior citizen centers for their participation and help in this research: Strafford VT, Randolph VT, Royalton VT, Barre VT, Chelsea VT, Bradford VT, White River Junction VT, Lebanon NH and Haverhill NH.

itself calls for more focused research in this area, stating that “a more precise contemporary delineation of the borders between the subregions of New England awaits more detailed local studies” (Labov et al. 2006:230). This study helps to answer that call.

Other localized research in this region includes Nagy 2001, which provides new insights into New Hampshire dialects and attitudes by means of a statewide survey. Boberg (2001) investigates the Western New England dialect region, and Nagy and Roberts (2004) provide an explanation of phonological features across New England. Nagy and Irwin (2010) examine two locations in southeastern New Hampshire in comparison to Massachusetts, and Madan (2010) provides phonological analyses of central New Hampshire. Villard (2009) studies *r*-lessness along a stretch of the Upper Connecticut River Valley straddling New Hampshire and Vermont, uncovering a correlation between postvocalic /r/ and local social attitudes. Our study fulfills the need for a new regional dialectology investigation focused specifically on the East-West dialect boundary, thereby producing data that can be compared with Kurath’s original fieldwork along that boundary in the 1930s (LANE). To this end, our fieldwork focused on the older generation of speakers (50+ years of age) because such speakers were the primary focus during Kurath’s era of traditional dialectology. Younger-aged speakers go beyond the scope of the present study, but it is the belief of the authors that an even sharper change is likely occurring in younger age groups as a number of traditional Eastern New England features recede.

The results of the present study suggest that Kurath’s line of contrast now lies significantly further east than that described by Kurath and Carver. We find that the East-West contrast now roughly follows the Connecticut River separating Vermont and New Hampshire, i.e., it does not lie further west along Vermont’s Green Mountains as Kurath and Carver had reported. This indicates a large-scale eastward shift of the Eastern New England-Western New England dialect boundary in recent decades. Our finding is based on three major variables that were analyzed in the recorded speech of senior citizens from around the region: the FATHER–BOTHER merger, the BATH–TRAP split, and *r*-lessness, all three of which will be discussed in detail below. Other variables examined, including COT–CAUGHT, DANCE–TRAP, HORSE–HOARSE, and MARY–MERRY–MARRY distinctions and numerous lexical items, showed no clear East–West distinctions.

2 Methods

This study utilizes field data collected from a total of 42 individuals: 24 from Vermont and 18 from New Hampshire. As Madan 2010 provides current data from central New Hampshire, our study is focused further west, primarily along the New Hampshire bank of the Connecticut River and westward into Vermont; in the analysis, Madan’s results are then referred to in order to provide geographic coverage of central New Hampshire. The participants are over 50 years old, and were born, raised, and have spent the entirety or great majority of their lives in Northern New England. Field interviews were conducted during the spring of 2010 at senior center luncheons located across Vermont and New Hampshire. Speakers were recorded at Vermont senior centers in the towns of Strafford, Randolph, Royalton, Barre, Chelsea, Bradford and White River Junction, and New Hampshire senior centers in Lebanon and Haverhill. Participants attending these luncheons represented a total of 31 local towns. A participant was considered to represent a given town if she or he was raised to adulthood in that town. It was necessary to allow for some mobility within the region later in life, especially after retirement. Unlike large urban centers in which many residents remain within the same metropolitan area for the majority of their lives, in rural New England we find that some amount of localized mobility is harder to control across speakers’ lifetimes, at least in the current era. The authors believe that all participants are appropriate representatives of their respective towns, and the consistent East-West distinctions present in the results (Section 3) support this assumption.

The interview protocol consisted of a wordlist, a list of sentences to read, a reading passage adapted from Nagy 2009, a lexical identification activity, and questions to elicit free speech. Interviews were recorded and acoustically analyzed using Praat, then tabulated and assessed using Microsoft Excel and a standard weighted-means analysis (ANOVA).

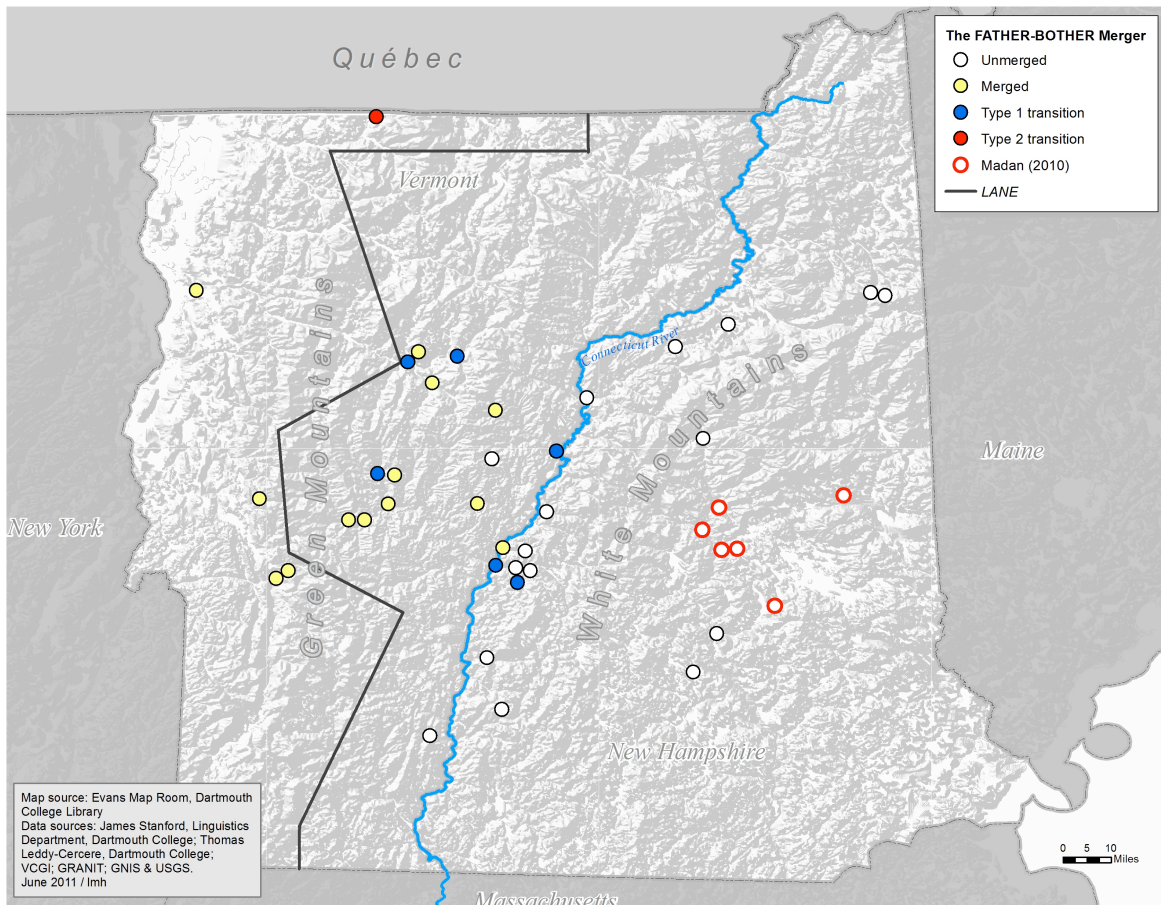
3 Results

3.1 The FATHER–BOTHER Merger

One of the significant East–West contrasts to examine is the merger of the [a] vowel of the FATHER lexical set with the [ɑ] or [ɒ] vowel of the BOTHER set. *LANE* locates the boundary of this merger roughly halfway across Vermont along the eastern edge of the Green Mountains, with speakers in western Vermont displaying the merger but those in eastern Vermont and New Hampshire maintaining the distinction.

Data pertaining to the FATHER–BOTHER merger was collected from 36 individuals. Words sampled as representative of the FATHER set include *father*, *palm*, *calmer*, *ma*, and *pa*. The BOTHER set includes *bother*, *lot*, *shot*, *cot*, *socks*, *commerce*, and *economy*. Tokens were obtained from the word list, sentence recitation, and reading passage portions of the interviews.

Of the 36 participants interviewed, 13 display a complete merger of the FATHER and BOTHER classes, 16 show no evidence of the merger, and 7 represent transitional cases in which certain FATHER-class lexemes are transferred to the BOTHER class while others remain distinct (discussed in more detail below). The results present a strikingly consistent geographic distribution, as displayed on the following map:



Map 1: The FATHER-BOTHER merger.

The data contains a definite East–West division between merged and unmerged cases, largely corresponding to the Connecticut River, which forms the border between Vermont and New Hampshire. Only two fully unmerged speakers are encountered to the west of the river and a

single fully merged speaker to the east, and none of the three are located further than one town distant from the border. It can thus be generalized that the speakers east of the Connecticut maintain distinct FATHER and BOTHER vowels, while those west of the Connecticut do not, with the transitional cases largely clustered close to the border on the western side. This East–West division shows significant eastward displacement as compared to the *LANE* data from 1939. This analysis is supported by the data gathered by Madan (2010), which includes six participants from the age demographic relevant to the current work (50+ years old). All are located in central New Hampshire, well east of the Connecticut River, and all maintain the FATHER and BOTHER classes (referred to by Madan as the PALM and LOT classes).

Transitional Cases. The seven participants (five from Vermont, two from New Hampshire) who have been identified as transitional cases (Map 2) can be divided into two types, with the first comprising three subdivisions (Table 1). These differentiations are made on the basis of particular FATHER-class lexical items that have been shifted to the BOTHER class. The different types are defined according to lexeme in Table 1, in which a shaded box indicates a reassignment from the FATHER to the BOTHER class. The Type 1 and Type 2 transitions seem to constitute separate developments, while the Type 1A, Type 1B, and Type 1C designations appear to represent the same pattern of change at differing stages of progression.

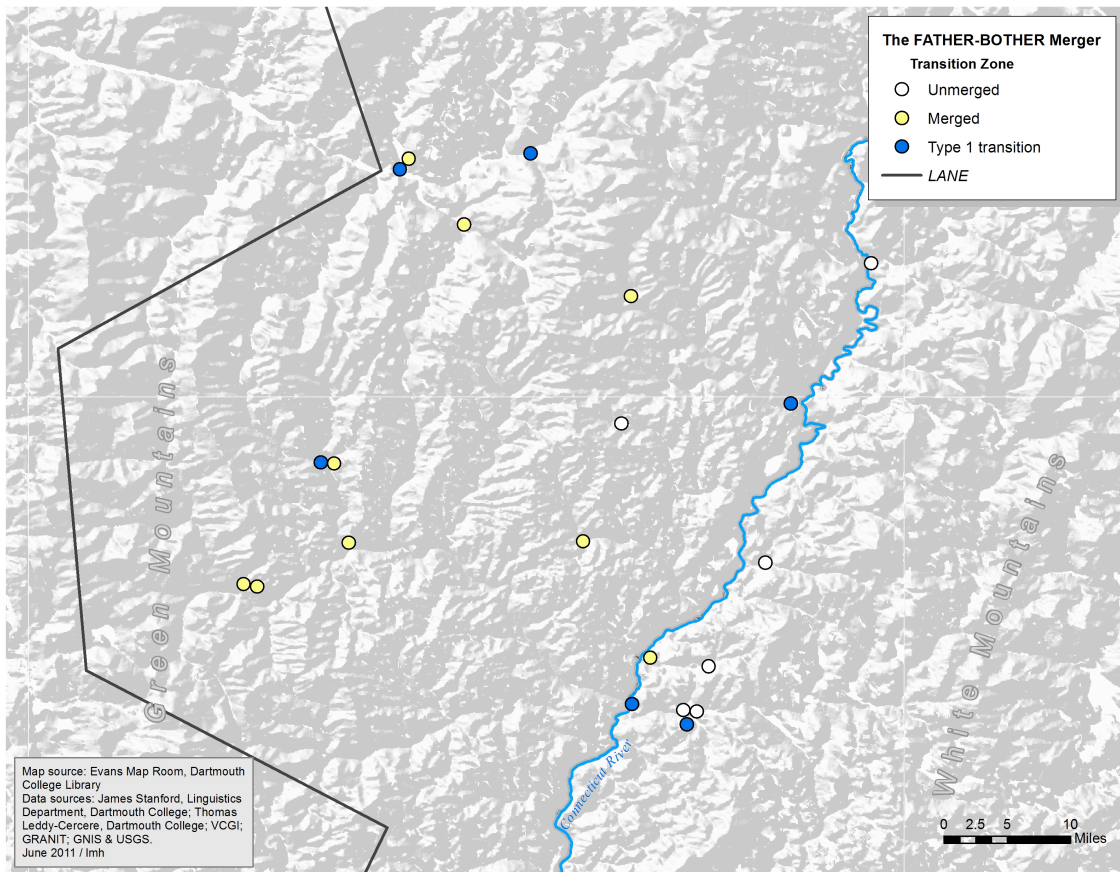
Type		Speaker	Lexical Item				
			<i>palm</i>	<i>ma</i>	<i>pa</i>	<i>calmer</i>	<i>father</i>
1	A	CB		n.a.			
		JB					
	B	MS					
	C	LC					
		LRI					
		TR					
2		AB				n.a.	

Table 1: Division by lexeme of transitional cases of the FATHER-BOTHER merger.

The Type 1 transition can be clearly defined as a graded, implicational shift of the [a] of FATHER-class lexical items to the BOTHER class. The word *father* itself is always pronounced with [a] by these speakers and thus appears most resistant to merger, followed by *calmer*, *pa*, *ma*, and *palm*, in that order. The Type 1A transition is typified by the preservation of [a] in *father*, *calmer*, and *pa*, Type 1B in *father* and *calmer*, and Type 1C in *father* only. All six Type 1 transition cases occur in a relatively compact geographic zone composed of east-central Vermont and the immediately adjacent area of New Hampshire, the greater part of which falls under the local appellation of “the Upper Valley.” In contrast to the rest of the survey area, this region is one of extensive variation; in addition to the transitional cases, it also contains two of the three cross-state “transgressions” found in the study (the unmerged speaker from Vershire, Vermont, and the merged speaker from Hanover, New Hampshire). Interestingly, though this area falls to the west of the general demarcation established by the current study, it is east of the borderline shown in *LANE*, firmly considered unmerged territory in 1939 (Kurath 1939–43:Maps 370, 478, 490). Thus, the variation may be viewed as a sort of westerly “wake” left behind as the merger has progressed eastward between 1939 and the present. The Type 1 transition cases are indicative of the fact that the merger, comparatively new to the area, has advanced at differing rates for differing lexemes.

The Type 2 transition, represented by the participant AB only, does not appear to be related to Type 1. For Type 2, the only FATHER-class lexeme not pronounced with [a] is the word *father* itself, which is pronounced [a] by all Type 1 speakers. Additionally, though the Type 1 transition cases are clustered in a single geographic area, AB’s provenance is significantly removed (ca. 70 miles distant in Richford, Vermont, along the Canadian border). As AB was the only individual surveyed from that portion of the dialect area, it is not possible to determine whether her Type 2 transition constitutes a regional trait or an idiosyncrasy. There is (admittedly scant) evidence in both directions. In favor of the identification of the Type 2 transition as an idiolectal development

is the fact that AB had spent significant stretches of her adult life in East Corinth and Bradford, Vermont, in far closer proximity to unmerged and Type 1 transitional areas, and is in fact married to a Type 1A transitional speaker. On the other hand, there is slim if tantalizing evidence from *LANE* that AB's northern roots may trace back to a historical pocket of resistance to the FATHER–BOTHER merger. As in the current study, *LANE* only presents data from a single town in the relevant region (Enosburg, ca. 8 miles from Richford), but intriguingly it is listed in the atlas as consistently unmerged, an anomaly similar to that presented by AB (Kurath 1939–43:Maps 370, 490). The question awaits further research.



Map 2: The FATHER–BOTHER merger: Transitional cases.

In summary, the current study finds the FATHER–BOTHER merger to be a viable variable in determining an East–West dialect boundary in Northern New England, just as it is in *LANE*. The specific delineation of that boundary, however, has shifted significantly eastward in the intervening decades, from the Green Mountains in 1939 to the Connecticut River in 2010. The transitional cases found in eastern Vermont and western New Hampshire are artifacts of this progression.

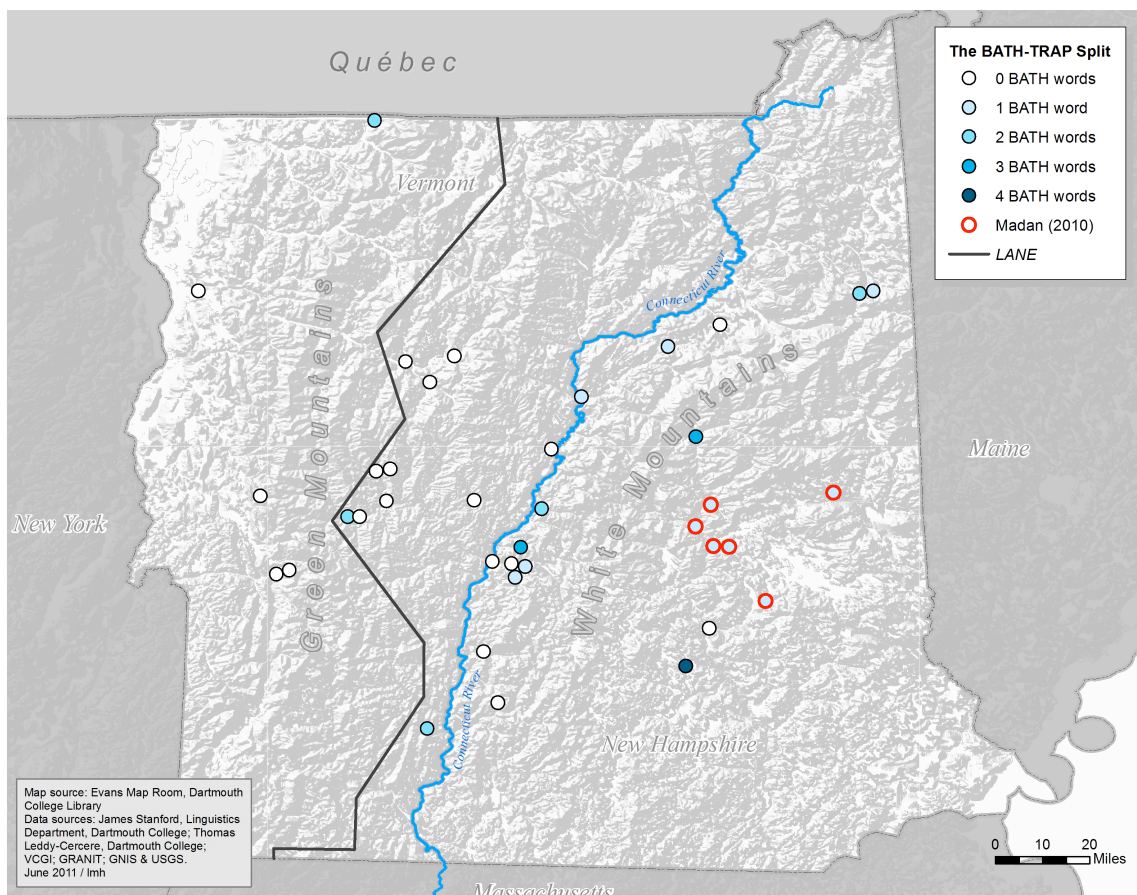
3.2 The BATH–TRAP Split

The second East–West variable apparent in the data is the BATH–TRAP split. The BATH lexical set, presumably transferred to New England from the area around London in the colonial period, arose from a lengthening of [æ] before voiceless fricatives followed by a “broadening” of the resultant [æ:]. In New England speech, this sound was ultimately realized as [a] (Wells 1982:133–135, Kurath 1939:9). *LANE* cites the Green Mountains in central Vermont as the westward extent of the [a] BATH class, beyond which these words are pronounced with the [æ] vowel of the TRAP class. Kurath also notes the highly lexicalized nature of the feature, particular lexemes being pronounced

with [a] are present only in a far more limited geographic area (Kurath 1939:9). The nature of the split in New England is taken up by Laferriere (1977) and Madan (2010), though with a small geographic scope, focusing on Boston and central New Hampshire, respectively.

Interviews from 32 individuals were utilized in gathering data on the BATH–TRAP split for the current study. Words used to represent the BATH set include *bath*, *path*, *laugh*, *calf*, and *afternoon*, while those analyzed from the TRAP set consist of *trap*, *bat*, *bag*, *bad*, *tax*, and *rather*. As with the FATHER–BOTHER merger, all tokens were obtained from the word list, sentence recitation, and reading passage portions of the interviews.

Of the 32 interviewees surveyed, a total of 13 pronounced at least one of the above BATH words with [a]. Of those 13, eight speakers produced only a single BATH word, two speakers produced two, two speakers produced three, and one speaker produced four. As seen with the FATHER–BOTHER merger, the Connecticut River once again seems to provide a rough westward boundary for the extent of the BATH–TRAP split. As seen in Map 3, 10 of the 13 individuals producing [a] in BATH-class words hail from New Hampshire (10 of 16 individuals surveyed in that state). Moreover, all five interviewees producing [a] in multiple BATH-class lexemes are New Hampshire residents. Of the three Vermonters with [a], one is located in Saxtons River, on the New Hampshire border, and another, from Richford in the far northern part of the state, has displayed otherwise anomalously eastern speech traits (speaker AB in Section 3.1 above). The third, from Stockbridge in central Vermont, is likely a relic pronunciation left behind in the BATH–TRAP split's former territory, as documented in *LANE*. Corroborating the above generalization, Madan's (2010) 50+ year-old respondents from central New Hampshire all displayed at least a single [a] pronunciation.



Map 3. The BATH–TRAP split. Note: “2 BATH words,” etc. indicates that the speaker produced [a] twice in BATH-class words.

Lexicalized Split. The spread of [a] in BATH words varies widely according to lexeme. This fact is noted in *LANE* as well; [a] is reported from the Green Mountains eastward in the words *calf* and *half*, but only in far more restricted, easterly zones for words such as *afternoon*, *glass*, and *pasture* (Kurath 1939:9). In the current study, *laugh* is far and away the BATH lexeme most commonly encountered with [a], pronounced as such by 11 of the 32 respondents. *Laugh* also accounts for 7 of the 8 individuals possessing only one distinct BATH word; 3 of those 7 are the only Vermonters displaying [a], thus giving *laugh* the largest geographic spread as well. *Calf* and *path* contained [a] in the speech of 4 individuals each, and *bath* in 3 individuals each. The geographic extent of these three lexemes as BATH words appears limited to New Hampshire, the westernmost examples of *calf* and *bath* occurring in Etna and *path* in Lyme (both communities situated along on the border with Vermont). *Afternoon* was not pronounced with [a] by any speakers. This trend is supported by Madan's (2010) research, in which [a] occurs in *laugh* significantly more often than in any of the other BATH words analyzed, including *calf*, *bath*, and *path*.

In summary, the current study finds that the BATH–TRAP split is a valid isogloss in determining an East–West dialect boundary in Northern New England. As with the FATHER–BOTHER merger, the westward extent of this variable appears to roughly correlate with the Connecticut River and the Vermont–New Hampshire border. This shows a significant shift eastward from the findings displayed in *LANE*, which document the split all the way to Vermont's Green Mountains. The extent of the split is sharply stratified by lexeme, most evident in *laugh*, less so in *calf*, *path*, and *bath*, and not at all in *afternoon*.

3.3 *R*-lessness

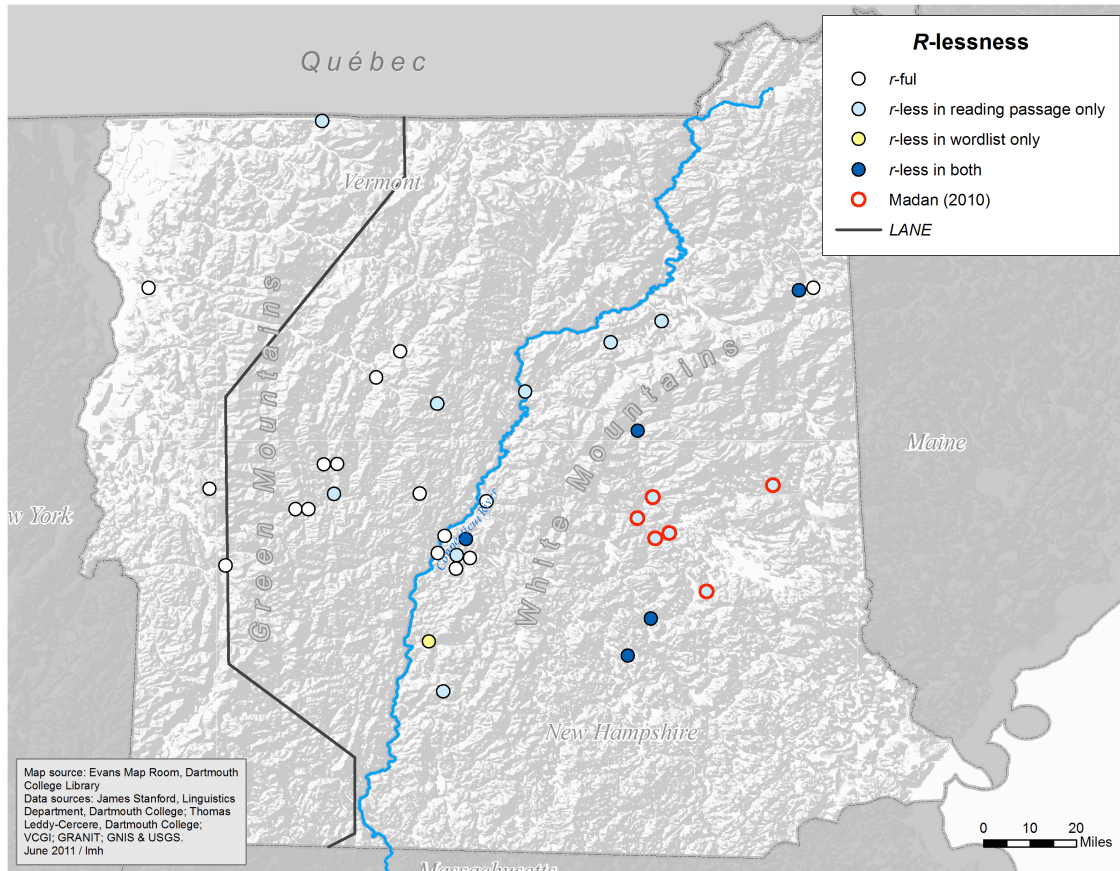
The third East–West variable encountered in the data is the spread of postvocalic *r*-lessness, perhaps the classic New England dialect feature in the public consciousness. *LANE* labels pre-consonantal and final *r*-lessness as an Eastern New England trait, widely present from the Green Mountains eastward (Kurath 1939:8). It has been examined by a number of localized studies (e.g., Villard 2009, Madan 2010) due to its status as one of the “major New England shibboleths” (Nagy and Roberts 2004:270). It is cited by *ANAE* as a key isogloss defining the Eastern New England dialect area, though the lack of sample points in eastern Vermont and western New Hampshire leave the specifics of its distribution uncertain (Labov et al. 2006:226).

A total of 27 participants from the current study were evaluated and labeled as *r*-ful or *r*-less according to the 75% *r*-vocalization threshold used by *ANAE* (Labov et al. 2006:226). Two trained judges analyzed these recordings for *r*-lessness using auditory judgments (coding reliability tests showed 90% or higher agreement between the two judges). Speech analyzed included both the wordlist and reading passage portions of the interviews, and a style contrast was observed (discussed below). On the basis of the wordlist, 7 of 27 interviewees qualify as *r*-less; when analyzed using data from the reading passage, however, 13 of the 27 receive an *r*-less classification.

As can be seen on Map 4, both groups show strong geographic cohesiveness. Working from the wordlist data, the *r*-less individuals are clustered in the interior of New Hampshire, slightly but not insignificantly east of the Connecticut River. By this measure, only 7 of 15 New Hampshire participants are considered *r*-less. The speakers who were judged *r*-less from the reading passage data are greater in number and wider in distribution. The Connecticut River seems to serve, as for the FATHER–BOTHER and BATH–TRAP variables, as a rough westward boundary, though with several outriding cases occurring across the border in both directions. All of Madan's (2010) subjects in Central New Hampshire meet the criteria for *r*-lessness, thus corroborating the geographic trend.

Stylistic Variation. Given that the wordlist represents more formal speech than the reading passage, the divergence in *r*-lessness rates between the two can be qualified as stylistic variation, perhaps due to a greater perceived prestige of rhoticity. It is not surprising to encounter such variation with regard to this variable due to the high social salience of *r*-lessness in New England. Tellingly, it was the only feature consistently mentioned by the study's participants when prompted to identify dialect features. Some went as far as to note that rhoticity varied according to social factors, even within individuals. Take, for example, the following quotation from firmly a non-rhotic speaker of North Woodstock, New Hampshire: “What gets me is sometimes . . . and you'll notice it, and you

probably have noticed it . . . some people up here, when they're trying to make a point or something, they'll start rolling their *r*'s." Similar connections of rhoticity to prestige and local identity are noted by Villard (2009).



Map 4: *R*-lessness.

In summary, the postvocalic /*r*/ data displays a stark East–West differentiation, though with a significant eastward shift from that presented in *LANE*. In formal speech, represented by the wordlist data, *r*-lessness exists only in interior New Hampshire. Even in the semiformal style of the reading passage, it persists west just as far as the Connecticut River and only sporadically beyond. Distinctly from the other variables described above, *r*-lessness is subject to variation in style, and this is likely due to its position of preeminent social salience amongst New England dialect features.

4 Conclusion

This study finds that an East–West dialect division still exists in Northern New England, at least amongst the older generation. However, the location of that division has shifted significantly eastward from the position identified by Kurath in the 1930s. Rather than falling along the Green Mountains of central Vermont, as it did in Kurath's time, the boundary between Eastern and Western New England speech now roughly follows the Connecticut River separating Vermont and New Hampshire. This conclusion is based on the evidence of the *FATHER*–*BOTHER* merger, the *BATH*–*TRAP* split, and *r*-lessness. Further examination of these variables has shown that this eastward shift has left evidence in the form of transitional speakers, has progressed largely lexically, and (at least in some cases) is subject to variation in style. The authors hope that these

findings will contribute to the contemporary understanding of the evolving dynamics and composition of these major U.S. dialect regions.

Further research on this topic would do well to examine the speech of younger generations of Vermont and New Hampshire residents. Preliminary data and personal testimony provided by younger speakers from Strafford, Vermont, and Claremont, New Hampshire, indicate that the traditional Eastern New England variants of the three major variables discussed above may no longer be present in younger speakers. Whether Kurath's division has changed form, continued its march eastward, or disappeared altogether remains to be determined. It is also possible that the East-West distinction will be maintained through different variables.

Regardless of the fate of his eponymous line, Kurath and his methodology remain strongly relevant to any modern-day examination of New England dialectology, and have provided a framework and inspiration for the current work. Though Kurath's era of traditional dialectology has at times been condemned as antiquated and ignorant to social detail, the results of the present study show that the approach utilized in *LANE* and its contemporaries can nonetheless provide a meaningful representation of the linguistic situation in the bucolic setting of Northern New England. After all, the current study shows that many of Kurath's 1939 findings were still relevant in 2010. The authors hope that this fact will not be ignored in further explorations of rural dialectology, both in New England and beyond.

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Thomas Leddy-Cecere
Department of Middle Eastern Studies
University of Texas
Austin, TX 78712-0527
thomas.a.leddycecere@gmail.com

Kenneth Baclawski, Nacole Walker, James Stanford
Department of Linguistics and Cognitive Science
HB 6220
Dartmouth College
Hanover, NH 03755
Kenneth.P.Baclawski.Jr@dartmouth.edu
nacolewalker@gmail.com
James.N.Stanford@dartmouth.edu