New England phonology[*]

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1.   Introduction

The six states that make up New England (NE) are Vermont (VT), New Hampshire
(NH), Maine (ME), Massachusetts (MA), Connecticut (CT), and Rhode Island
(RI). Cases where speakers in these states exhibit differences from other American
speakers and from each other will be discussed in this chapter. The major sources
of phonological information regarding NE dialects are the *Linguistic Atlas of New
England* (*LANE)* (Kurath 1939-43), and Kurath (1961), representing speech pat-
terns from the first half of the 20th century; and Labov, Ash and Boberg, (fc);
Boberg (2001); Nagy, Roberts and Boberg (2000); Cassidy (1985) and Thomas
(2001) describing more recent stages of the dialects.

   There is a split between eastern and western NE, and a north-south split within
eastern NE. Eastern New England (ENE) comprises Maine (ME), New Hamp-
shire (NH), eastern Massachusetts (MA), eastern Connecticut (CT) and Rhode Is-
land (RI). Western New England (WNE) is made up of Vermont, and western MA
and CT. The lines of division are illustrated in figure 1. Two major New England
shibboleths are the "dropping" of post-vocalic r (as in [ka:] *car* and [ba:n] *barn*)
and the low central vowel [a] in the BATH class, words like *aunt* and *glass* (Carver
1987: 21). It is not surprising that these two features are among the most famous
dialect phenomena in the region, as both are characteristic of the "Boston accent,"
and Boston, as we discuss below, is the major urban center of the area. However,
neither pattern is found across all of New England, nor are they all there is to the
well-known dialect group. We present a brief description of the settlement of the
region as a whole and give examples of past and current pronunciation patterns
to illustrate both how New England differs from the rest of the country and what
region-internal differences exist. The material is rather thin in some areas, due to
a dearth of recent research on New England English. Nevertheless, the resulting
pattern is one that reflects the richness and diversity of the region itself.

2.   European settlement of New England

Our story begins with the European settlement of a region that was previously
populated by a variety of indigenous peoples. There has been no systematic study
of the possible influences of the indigenous languages on English, but we can see
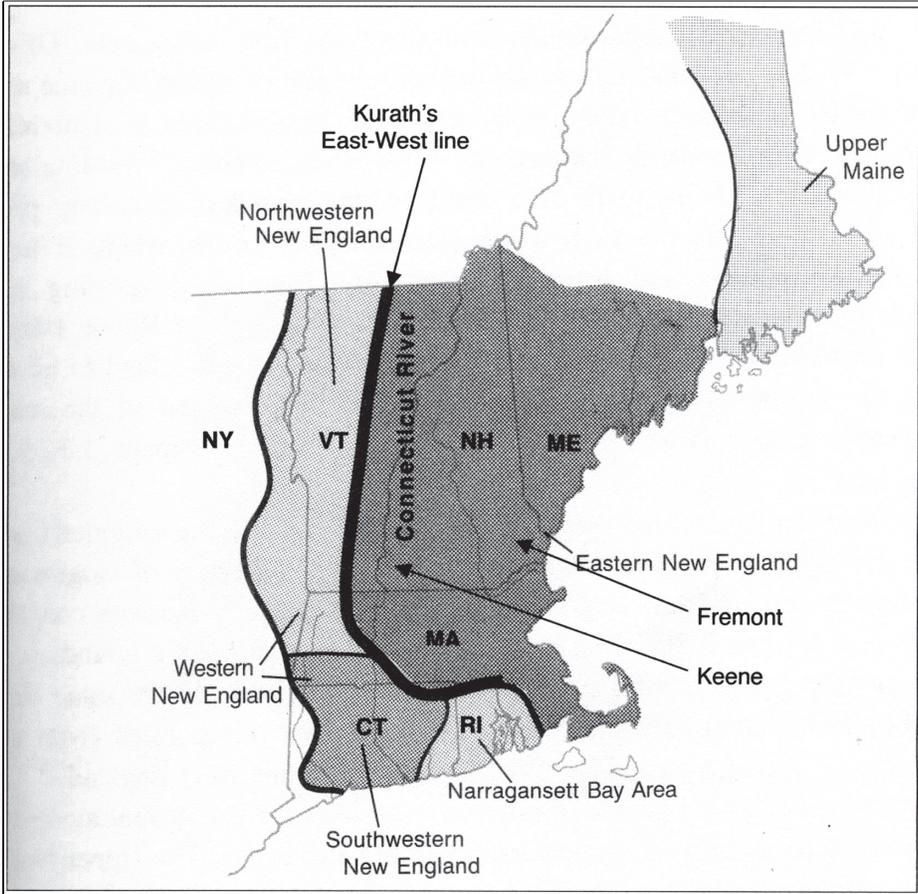
Figure 1   Eastern and Western New England according to Carver (1987: 31). Reprinted
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their influence in local toponyms, for example the Piscataqua River in NH, the
Kennebec River in ME, Lake Memphremagog in VT, and Contacook, a town in
Rhode Island, as well as the word Massachusetts.

European settlers in Eastern New England came primarily from Boston, on the
Massachusetts Bay, and were of English stock. This coastal area, originally home
to indigenous groups, was settled by English immigrants in the early 1600's and
became one of the country's cultural hearths. In search of better farm land, some
of these original European settlers moved west from the coast and settled the
Lower Connecticut River Valley in central CT. They were joined soon after by
new immigrants from eastern and southern England, and later from Italy, Scotland
and Ireland, among other places. Settlement spread, generally along river valleys,
into NH, VT, ME, and RI (Carver 1987: 7).

WNE was settled by migration from central MA and central and western CT, including Hartford, Springfield, and New Haven, towns originally settled in the 1630's (Boberg 2001: 4). Following this movement, Eastern and Western NE remained isolated from each other until the early 18th century (Rosenberry 1962: facing 70; Kurath 1972: 42, cited in Boberg 2001: 4). Western VT was settled speakers in the late 18th century by English-speaking migrants from western CT and MA (Kurath 1939-43: 104, cited in Boberg 2001: 5) and from NY (Rosenberry 1962: 136, cited in Boberg 2001: 5), as well as some settlers from east of the Green Mountains (NH, ME, and RI) (Kurath 1939-43: 103-4, cited in Boberg 2001: 5). WNE, in turn, was "the staging ground for the initial English-speaking settlement of the Inland North" (Boberg 2001: 9).

WNE also "received a considerable admixture of Scotch-Irish in the half century preceding the Revolution [early 18th century]" (Kurath 1928: 391, cited in Boberg 2001: 9), though they did not form a sizeable percentage of the population at any time. Also present in NE are Franco-Americans who moved south from French-speaking parts of Canada, and large Irish and Italian groups. Upper ME (north of Penobscot Bay) is quite distinct from the rest of the region, due to ties with New Brunswick, Canada (Carver 1987: 31).

Boston, the largest New England city, is still known as the *hub*, hearkening back to its position as the center from which settlements radiated in New England. Much of the rest of NE, however, is more rural, with many farms, forests, and undeveloped areas surrounding small towns and cities. Like many rural communities, NE is undergoing changes including increased highways, in-migration from other dialect areas, and change from small family farms to agribusiness (Frazer 1983; Labov 1994). The rural, regional dialects appear threatened with obsolescence due to the decrease in agriculture and increase in in-migration by speakers from other states. This loss evokes mixed reactions within the communities, where it may be seen as a sign of progress and increasing sophistication as well as a loss of cultural identity (Ring 1997).

3.   New England dialect regions

The *Linguistic Atlas of New England* (Kurath 1939-43) divides the area into Eastern (ENE) and Western (WNE) (divided by the Green Mountains of VT in the north, the Berkshires in the middle, and the Connecticut River in the south), with seven subregions dictated by settlement patterns (Carver 1987). However, today there is little in the way of linguistic markers of these sub-regions, aside from some distinctive characteristics of ENE. *A Word Geography of the Eastern United States* (Kurath 1949) divides New England into only three regions (Northeastern, Southeastern, and Southwestern), better representing current linguistic differences.

As table 1 demonstrates, the English of NE is in many ways similar to that heard in many other regions of the United States. In the following section, we will discuss the ways in which NE English may be different from other regions.

4. Vowels

Table 1. New England vowels — summary

KIT	ɪ	FACE	eɪ	START	aː(ɹ) ~ ɑː(ɹ)
DRESS	ɛ	PALM	aː ~ ɑː	NORTH	ɔ(ɹ) > ɒə
TRAP	æ > ɛə	THOUGHT	ɑ ~ ɔ	FORCE	ɔ(ɹ)
LOT	ɑ ~ ɒ	GOAT	əo > ɔ	CURE	jʊə(ɹ)
STRUT	ə	GOOSE	ʊuː	happY	i
FOOT	ʊ	PRICE	ɑɪ > əɪ	lettER	ə(ɹ)
BATH	æ > ɛə > a	CHOICE	ɔɪ	horsES	ə > ɪ

Table 1. New England vowels — summary

CLOTH	ɑ	MOUTH	aʊ>əʊ	commA	ə(ɹ)
NURSE	ə(ɹ)	NEAR	iə(ɹ)	kittEn	ən ~ ņ
FLEECE	iː	SQUARE	ɛə(ɹ)	aunt	ɑnt

In discussing the vowel patterns, we begin with the elements considered essential as points of departure for the phonological analysis of North American English dialects, according to Labov (1991: 21). The lack of a merger between low, back, unrounded /ɑ/ (LOT) and mid, back, rounded, lengthened /ɔ/ (THOUGHT) and the behavior of low front /æ/ (TRAP/BATH) as a unified phoneme (rather than split into tense and lax classes) are seen as essential conditions for the Northern Cities Chain Shift (NCCS), a major ongoing change in American phonology. The presence of these two phonemic patterns are necessary for the onset of the NCCS: TRAP/BATH raises, leaving a space for LOT to move forward and maintain its distinction from THOUGHT (Boberg 2001: 11; Labov 1994: 184; Gordon, this volume), thus initiating a chain shift.

4.1. TRAP, BATH, HAPPY and DANCE

At the time of the *Linguistic Atlas of New England (LANE)* fieldwork, both BATH and TRAP comprised a unified low front vowel across New England (Kurath 1939-43: Maps 150 *sack*, 344 *pantry*, and 371 *dad*, cited in Boberg 2001: 13). Laferri-

ere's (1977: 102-3) findings from urban Boston show a less uniform picture. She reported for BATH a non-productive backing: lexicalized and categorical before many /f/ and /θ/ words and in some /n/ words (e.g., *half, rather, aunt*) and lexicalized but variable before /s/ and in other /n/ words (e.g., *last, dance*). Supporting evidence comes from Calais, ME, where a majority of speakers report saying [ant] for *aunt*. Some speakers report [ɑnt], but none report [ænt]. This differs from much of the US, where [ænt] is used (Miller 1989: 124). Our NH speakers use [æ] for all of these word classes except *aunt*, which is [ɑ].

Laferriere (1977) also reports a productive, phonological process raising TRAP and BATH to [ɛə], demonstrated by her younger speakers. As this process was found to affect both TRAP and BATH vowels, it thus encroaches on the lexical BATH class that had been subjected to backing.

A more recent study of WNE found raising of the nucleus in TRAP and BATH in all environments and tensing (as well as raising) before nasals (DANCE) (Boberg 2001: 17-19). A small sample of telephone survey data (Labov, Ash and Boberg fc.) showed this to be the case across WNE with exception of the very northern city of Burlington, Vermont. Words like *bad* and *stack* are pronounced with [eə], and words like *stand* and *can* are pronounced [ɛə].

Labov (1991: 12) suggests that unified raising of TRAP/BATH/DANCE is a pivot condition for the NCCS (Northern Cities Chain Shift). Boberg (2001: 11) further argues that the NCCS may thus have had its beginnings in northwestern NE. The existence of this raising pattern is surprising if one accepts the reported lack of BATH-raising in the *LANE* data (Kurath 1939-43), especially given that Labov, Ash and Boberg (fc.) does not show this to be an incipient vigorous change: older speakers show more raising than younger speakers in Hartford, CT, Springfield, MA, and Rutland, VT (Boberg 2001: 19).

4.2.   LOT, CLOTH and THOUGHT

There was a major split within New England as early as the 1930's at which point ENE did not have a distinction between LOT and THOUGHT, while WNE had two distinct phonemes, (Kurath 1939-43, discussed in Boberg (2001: 13). ENE pronounced both LOT- and THOUGHT-type words with [ɒ], while virtually all of WNE used [ɑ] and [ɔ:] respectively, resembling NYC.

One modern exception to this pattern is Providence, RI, where the two vowels are distinct (Labov 2000: Map 1). Another may be Calais, ME, where no speakers reported a merger in Miller (1989: 101). More recent data (Labov, Ash and Boberg fc.) presents a strikingly different picture for the LOT/THOUGHT merger. While all western CT speakers keep the two values clearly distinct, resembling the Inland North pattern, seven of eight VT speakers have completely merged the two vowels. One older northern VT woman did not merge these vowels, suggesting that the merger is more recent in VT than CT (Boberg 2001: 20). This trend is supported

by unpublished data from the McGill-Vermont-New Hampshire Survey (Nagy, Roberts and Boberg 2002) which shows most New England speakers report merging these two vowels. Our two recorded NH speakers produced LOT, CLOTH and THOUGHT with [ɑ]. One of them also produced PALM with this vowel.

Boberg (2001: 22) attributes the presence of the merger in VT to lack of contact with the Inland North (due to the barrier of Lake Champlain) combined with contact over the Green Mountains with the merged speakers of NH. In contrast, CT speakers have more contact with NY and thus retain the distinction. Geographically located between CT and VT, western MA speakers exhibit an intermediary variable pattern. In our data, however, MA has the highest rate of merger. Interestingly, Burlington, VT speakers show a tendency to merge LOT and THOUGHT in low back position, similar to the ENE merger (and to the Canadian merger just north of them), whereas the two Rutland speakers, 67 miles south, show a merger in low-central position (like that of southwestern NE) (Boberg 2001: 24), providing a gradual transition between the northern and southern WNE patterns.

To summarize, with respect to the LOT/THOUGHT merger and BATH/TRAP/DANCE raising, ENE has full merger of LOT/THOUGHT (except RI) and no BATH/TRAP/DANCE raising, except for that reported in Boston by Laferriere (1977). WNE is more complex:

> The CT portion of the lower Connecticut Valley (the Hartford area) is a pure Northern [NCCS] system, with raised [bath/trap] and centralized [lot], distinct from mid-back [thought]. Northwestern VT (Burlington) is a pure "third dialect" system, not unlike the Canadian systems to the north of it [with no bath raising and a lot/thought merger]. Between Burlington and the lower Connecticut Valley are two transitional types. Springfield, and perhaps western MA in general, is basically Northern [NCSS] but shows a reduction of contrast between the low-back vowels, which may be tending toward merger among the youngest speakers in that area. Southwestern VT (Rutland) shows a solid merger of the low-back vowels but in the phonetic position characteristic of [lot] in western MA and CT (Boberg 2001:25-6).

4.3.   FACE and FLEECE

In general, there is nothing remarkable about these tense front vowels. However, Duckert (1986: 141) reports diphthongs in words like [maʃiˈjan] *machine* and [dreijan] *drain* as a feature of rural New England dialects. Laferriere (1979: 431) lists the variable pronunciation of FACE as [iə] or [eə] as a marker of Boston speech.

4.4.   GOAT

Avis (1961) described a complex pattern involving GOAT in ENE. Reporting on the data from *LANE*, Avis argues that there are, in fact, two phonemes: an upgliding

phoneme that appears word-finally, and another phoneme in which alternation can be found between monophthongal [o] and one with a fronted inglide [əo]. Avis (1961: 552) also notes that the monophthongal vowel is more likely to be found in "dialectal" speech than in words "learned in school". Avis does not report on this vowel in WNE. Roberts (1997) indicates that GOAT is produced as a lowered, lax vowel with either no glide or a shortened upglide in VT. All older and younger adult speakers produce low, lax GOAT, overlapping with their productions of FORCE.

Laferriere (1977: 431) reports GOAT as [ɒ] as a feature of Boston English.

4.5.   GOOSE

Kurath (1939-43) found that both a tense ([u]) (as in *too*) and a lax ([ʊ]) (as in *took*) production of GOOSE occurred in NE, but we hear only [u] today.

4.6.   PRICE and MOUTH

Miller (1989: 110) reports Canadian raising (the production of PRICE and MOUTH before voiceless vowels as [əʊ]and [əɪ] respectively) in Calais, ME —not surprising as this town is on the border of Canada. Raising was reported in Calais in *LANE* (Map 354, vol. II, Part 1 ; Map 481, vol. II, Part 2 ; Map 53, vol. I, Part 1, cited in Miller 1989: 110), but not in neighboring towns. Kurath and McDavid (1961: 109-10, cited in Miller1989: 112) cited patterns similar to Canadian raising for coastal ME and southern NH. However, Canadian raising has not been reported elsewhere in NE. Our NH speakers do not produce raised nuclei in these diphthongs.

A pattern that may be seen as similar to Canadian raising, however, has been reported in Vermont for some time. Kurath (1939-43) reported a fronted, raised nucleus of MOUTH was being overtaken by a fronted, but low production in VT. He also found that change in progress was occurring with PRICE, in that the raised nucleus was receding in favor of a lowered, more "standard" pronunciation. Work by Amblo and Roberts (1997) notes the continuation of this trend in VT in that women and younger speakers are pronouncing these vowels in a more standard-sounding way than older rural men.

4.7.   START

Some variation between the central and back variants is seen for this vowel in NH. Our older male western NH speaker produced START with the central [a], while the younger female eastern NH speaker produced it with [ɑ]. The vowel /ɑ/ before /ɹ/ appears as [ɑ] even along the ME/New Brunswick border, in spite of the contact with Canadian [ɔr] pronunciations (Miller 1989: 88). Examples include *tomorrow*, *sorry* and *borrow*. This pattern was also reported in *LANE* (Kurath 1939-43: Map 72, vol. I, Part 1 and Map 564-5, vol. III, Part 1). However, all of Miller's sixteen

speakers report [ɔɹɪndʒ] for *orange* (*ibid.* 89), while *LANE* (Map 273, vol. II, Part 1) reported [ɹɪndʒ] for this area.

4.8.   NORTH/FORCE

ENEers traditionally made a distinction between pairs like *for* and *four*, or *horse* and *hoarse*, which is not heard in most of the rest of the U.S. As a result of this distinction, combined with r-dropping, a Boston pronunciation of *short* rhymes with *shot*; *north* rhymes with *moth*. This distinction may be disappearing among young people (Labov, Ash and Boberg fc.). Our NH speakers have merged these two vowels.

Laferriere (1979: 428) defines the vowel in *short* and *forty* (NORTH) as [ɒə], in contrast to the standard [oə(ɹ)]. The words which have this vowel in standard American English are divided (apparently arbitrarily, cf. McCarthy 1999) into two classes in the Boston dialect, some of which allow this alternation and some which use only [oə] (Laferriere 1979: 429).

4.9.   BOTHER and FATHER

Bostonians and Northern New Hampshirites generally maintain a distinction between the vowels in the first syllables of *bother* [ɑ] and *father* [a], while many residents of VT and southern NH, especially younger people, have merged those vowels (Nagy 2001). Miller's respondents (Miller 1989: 124) report that *father* and *bother* do not rhyme in Calais, ME.

4.10.   MARY, MERRY and MARRY

Many speakers in eastern MA and northern NH have three distinct pre-rhotic front vowels, differentiated in the triplet *Mary* [e:] ~ *merry* [ɛ] ~ *marry* [æ], while those in VT and southern NH pronounce the three words alike (Nagy 2001; Nagy and Roberts 1998). Miller (1989: 99) reports that most speakers in Calais, ME, have a two-way merger: for 80% of the speakers, *Mary* and *marry* are [meri] and *merry* is [mɛri]. 13% of the speakers surveyed have merged all three. (7% have slightly different two-way mergers.) This indicates a marked change from *LANE*, where a three-way distinction was maintained across NE (Miller 1989: 100).

4.11.   Mergers before L

Pre-lateral mergers that occur in other parts of the U.S. are documented as *not* occurring in NE in Labov, Ash and Boberg fc. These include the following tense and lax vowel pairs before /l/: /i/ and /iɪ/ (*pill* and *peel*), /u/ and /uʊ/ (*pull* and *pool*), and /e/ and /eɪ/ (*well* and *wail*).

5.   Consonants

5.1.   T, D

Several types of substitutions involving the alveolar stops /t/ and /d/ appear in the New England area. These include both substitutions of spirantized variants for alveolar stops as well as alveolar stops substituting for interdental fricatives. Glottal stop replacement of /t/ (e.g., [mɪʔn̩] *mitten*, [vəɹmɑʔ] *Vermont*, [rəɪʔ ɑn] *Right on!*) in VT appears to be a robust dialect phenomenon. Although considered to be a traditional rural phenomenon most common to older male speakers, these glottal forms are found in speakers of all ages in VT. Children produced at least as many glottal stop forms as their parents, with girls producing more /ʔ/ than boys (Roberts 2001). These findings demonstrate that dialect obsolescence, common in rural areas, does not necessarily mean a change toward "Standard English." In this case, girls appear to be leading a change toward a resurgence of glottal stop replacement. Similar findings have been reported in the United Kingdom where research on the glottal stop has been going on for years (cf. Milroy et al. 1994; Foulkes, Docherty and Watt 1999).

Nagy and Ryback-Soucy (2000) indicates the frequent use of alveolar stops /t/ and /d/ in place of interdental fricatives /θ/ and /ð/ among speakers who self-identify as members of the Franco-American community of Manchester, NH.

Finally, Miller (1989: 104) reports categorical flapping in *butter* for the speakers he surveyed in ME. *LANE* also reports flapping for most of NE (Map 496, vol. III, Part 1, cited in Miller 1989: 105). This is in keeping with the general pattern of northern AmE: categorical post-tonic flapping for all speakers (Strassell 1997).

5.2.   Word-initial H

The Franco-American speakers studied in Manchester, NH, who substitute [t,d] for /θ, ð/, also variably omit word-initial H and insert an initial H in underlyingly vowel-initial words (e.g., [oli h nd əl a] *Holy Angel High*). Interestingly, several of these speakers are monolingual Anglophones, so this is not a case of mother tongue interference in a second language, but rather a marking of cultural identity.

5.3.   W/HW distinction

The distinction between word initial <wh> and <w> words, as in *which* and *witch,* is retained to some extent in parts of NH, VT, and MA (Labov 2000). This pattern was reported in *LANE* (Map 163, vol. I, Part 2, and Map 179, vol. I, Part 2, cited in Miller 1989: 108). However, the distinction was not maintained by Miller's ME speakers. Kurath and McDavid (1961: 178) mention this merger as occurring "in a narrow coastal strip of NE extending from Boston to the Kennebec in Maine."

5.4.   Jᴜ (jod-dropping)

Our survey data (Nagy and Roberts 1998) show the continuing presence, mostly among older speakers, of a palatal glide or jod between alveolar consonants and [u] in words such as *new* [n(j)u] and *Tuesday* [t(j)uzdeɪ]. This was also noted by Duckert (1986: 141) as a feature of rural NE speakers. Interestingly, *LANE* shows a preference for the jod-less pronunciation even among the oldest speakers (Kurath 1939-43: Map 4, vol. I, Part 1). Sixteen speakers from Calais, ME, surveyed in the late 1980's showed no use of the jod in either relevant survey question (the pronunciation of *during* and *reduce*) (Miller 1989:86).

5.5.   ʀ vocalization and intrusive ʀ

Finally, a frequently noted feature of ENE, also exhibited by speakers in the Virginia and North Carolina hearth areas, is the vocalization (popularly referred to as "dropping") of /ɹ/ in post-vocalic position. People talk about "New Hampsha" and "Woosta" for *New Hampshire* and *Worcester*. Similarly, Laferriere (1979: 431) indicates that the ʀ-less production of sᴛᴀʀᴛ with [a:] is a marker of Boston speech. Linking ʀ is produced: if the following word begins with a vowel, the ʀ is rhotic (*hear it*). A related NE pattern is the appearance of inter-vocalic /ɹ/ where the standard spelling does not indicate it, referred to as intrusive ʀ, as in [sa:ɹ ɪt] *saw it*.

   According to Labov (1966), "the vocalization of /ɹ/ is eroding under the influence of the post World War II convention that constricted /ɹ/ is the appropriate standard for careful speech." However, all three Boston speakers included in Labov (2000) show some vocalization of /ɹ/, and one Bostonian shows 50%. In contrast, most of WNE shows consistent [ɹ].

   Our recorded NH speakers vocalize /ɹ/ in reading the word list, in words such as cᴜʀᴇ, ʟᴇᴛᴛᴇʀ, ꜰᴏʀᴄᴇ, ɴᴏʀᴛʜ, sᴛᴀʀᴛ, sQᴜᴀʀᴇ, and ɴᴇᴀʀ. Variable vocalization is also evident in the recorded and transcribed narratives.

6.   Compound word stress

Duckert (1986: 141) reports a tendency for stress to appear on the second element of compound words such as *maple TREE*, *band CONCERT*, *polar BEAR*, and *battle FIELD* in rural NE speech. We are not sure if this pattern is constrained to NE.

7.   Summary

As we have shown, NE presents a complex linguistic profile. There are a number of both consonantal and vowel patterns that preserve the distinction between

NEEnglish and other varieties present in the U.S. Some of these features are uniformly distributed across NE, while others illustrate the maintenance of distinct dialect subregions. It appears that, as people more frequently move into the area from all over the country, New Englanders increasingly sound like other AmE speakers. However, some local features remain. Many New Englanders still "drop their r's," though no longer as consistently or in as many words as they used to. Others substitute glottal stop for T, and many retain a variety of fairly subtle vowel differences. Thus, much as found by the scholars who documented the linguistic patterns of this region in the early 20th century, both the NE dialect and its regional subdialects operate as relevant markers of NE identity today.

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Please consult the General References for titles mentioned in the text but not included in the references below. For a full bibliography see the accompanying CD-ROM or online version.

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