anymore, It's on Twitter:

Positive-*Anymore*, American Regional Dialects, and Polarity-Licensing in Tweets

Abstract

Positive-*anymore* is recognized as a feature of some dialects of English. However, because positive-*anymore* occurs infrequently in conversational speech, studies have generally relied on grammaticality judgments. This article takes advantage of the massive corpus of speech-like text available on Twitter to study productions of positive-*anymore* in American English. More than 80,000 tweets containing *anymore* were collected over one month from areas around five Midland cities and three non-Midland cities. Tweets were coded for twenty types of NPI trigger and for the position of *anymore* within clauses. Results confirm that, in the context of American regional Englishes, positive-*anymore* is a distinctive feature of the Midland. However, results also show intra-regional differences within the Midland, with *anymore* being produced more frequently in Pittsburgh and less frequently in the western Midland cities of Kansas City and St. Louis. Midland cities also show increased incidence of *anymore* with several NPI triggers that should license NPIs in all dialects, suggesting that these ostensibly ordinary NPI triggers may affect or be affected by the use of *anymore* in positive polarity contexts. More generally, this research models ways that productions of positive-*anymore* and other low-frequency linguistic variables might be studied through media like Twitter.

Keywords

positive-*anymore*, polarity, NPI, Midland, Twitter

Introduction

The adverb *anymore* may occur at the end of a negative clause in all dialects of American English, as it does in the tweet in (1):

(1) I figured it out. Internet age/texting/Twitter = punctuation doesn't matter *anymore*. People assumed “Love Trump's hate.” (Chicago, Nov. 23)

In this standard usage, *anymore* is a negative polarity item (NPI) licensed or triggered by the negative particle *-n't*. Additionally, the tweets appearing as (2), (3), and (4) show that, for some speakers, *anymore* can occur in a broader range of clause types and clausal positions, and in non-negative polarity clauses:

(2) *Anymore*, there's Murphy's Law, and then there's the #Bears. (Chicago, Nov. 21)

(3) My personal style *anymore* is “I didn't expect to get out of the car” (Columbus, Nov. 9)

(4) Mizzou is a dumpster fire *anymore*. Domestic violence, weed arrests, losing to a school nobody's heard of? What in the actual fuck? (Kansas City, Nov. 30)

These “positive” forms of *anymore* have been studied a number of times since first being noted in American Englishes in the 1930s, and are interesting for researchers studying dialects, semantics, syntax, and other domains of linguistics. However, positive-*anymore* poses several

challenges to researchers. In particular, positive-*anymore* occurs infrequently in conversational speech, making it difficult to study the feature quantitatively in speech corpora.

Researchers have filled the gap in production data, to an extent, by eliciting grammaticality judgments about *anymore* in surveys. But (see below) studies also regularly report that people fail to recognize positive-*anymore* in their own speech and the speech around them, meaning that findings about positive-*anymore* based on grammaticality judgments must always be interpreted cautiously.

The huge volume of speech-like text on Twitter offers a potential workaround to the problem of low-frequency grammatical variables like positive-*anymore*. In this study, I attempt to take advantage of Twitter to contribute new and needed production data to the legacy of positive-*anymore* literature. This approach will inform knowledge about the occurrence of *anymore* in relatively naturalistic language and the status of positive-*anymore* as a dialect feature of American English. It will also model methods for studying *anymore*, specifically, and low-frequency grammatical variables more generally.

Background

Anymore, What Does it Mean?

Malone (1931) first documented and commented on positive-*anymore* in the miscellany section of *American Speech*, and glossed it as 'now.' Malone further offered that "in standard speech the use of the locution always goes with a negative," but for some speakers "this rather artificial rule has been chucked, and *any more* is used freely in affirmative as in negative sentences" (460). Carter (1932, 236) posited that positive-*anymore* additionally embodies "a

greater degree of finality to the contrast and less likelihood of future change." Ferguson (1932, 234) similarly suggested that positive-*anymore* could be substituted for 'now' when 'now' is not "sufficiently expressive of the speakers's attitude." Krumpelman (1939, 156) argued that positive-*anymore* did not necessarily imply a contrast with past events, and was the first to gloss positive-*anymore* as 'nowadays.' Parker (1975), Murray (1993), and Coye (2009) all adopt 'nowadays' as part of positive-*anymore*'s meaning. Indeed, Parker (1975) attributed the spread of *anymore* into positive clauses to negative-*anymore*'s semantic overlap with *nowadays*: *anymore* can standardly occur in negative clauses to express past, present, or future time, while *nowadays* can standardly occur in positive and negative clauses only to express present time. (Note, though, that Labov [1973, 73] had already pointed out that *nowadays* and positive-*anymore* were not mutually substitutable, demanding a more complex semantic-syntactic account than the one Parker offered.)

The notions these linguists raised with regard to polarity (Malone), implication (Carter and Krumpelman), and modality (Ferguson) have been independently examined in an expansive semantics literature on negative polarity items. Klima's (1964, 289-295) landmark study on negation in English identified the negative particle (*not*), negative affixes (*un-*, *in-*, *dis-*, etc.), and "inherent negatives" (*doubt*, *forbid*, *too*) among others as environments favorable to *any* (including a series of citation sentences with *any more*--but all quantificational instances, rather than the adverbs of time that are relevant to positive-*anymore* [1964, 291-292]).

Subsequent work on NPIs in English and other languages (see van der Wouden 1997, 60-61, or Giannakidou 2011, 1661-1663, for examples) has revealed the tremendous complexity of NPIs as a universal feature of language. While there is a general property that NPIs are licensed

or triggered by falling in the c-command scope of negation (Giannakidou 2011, 1663), studies of specific NPIs, classes of NPIs, and NPIs cross-linguistically have routinely identified idiosyncratic and exceptional behaviors. Indeed, von Bergen and von Bergen (1993) conclude, "There is no single principle that can explain negative polarity uniformly" (as cited in van der Wouden 1997, 79). Hoeksema (2010, 218) similarly posits:

> I believe that "negative polarity item" may well be a grab bag, similar to, say, "adverb," that does not directly play a role in the grammar, but serves as a convenient term to refer to a loosely knit group of expressions with overlapping distributional properties.

Ladusaw (1996) summarizes four areas of research into NPIs (which I paraphrase roughly here): How are NPIs licensed? What are the properties of NPIs? What are the structural, semantic, and other relationships between NPIs and their licensers? And are NPIs that violate licensing requirements uninterpretable or simply pragmatically bad? Van der Wouden (1997, 81-93) provides an overview of attempts to answer these questions from syntactic, pragmatic, and semantic perspectives. One particularly influential approach is Ladusaw's (1980) proposal that "α is a trigger for negative polarity items in its scope iff α is downward entailing" (summarized in Giannakidou 2011, 1668). Zwarts (1998) identified increasingly restrictive categories of downward entailment as antiadditive and antimorphic, which in turn allowed him to distinguish among "weak," "strong," and "superstrong" NPIs corresponding to a range of triggers that license them (summarized in Giannakidou [2011, 1669]; see also the long summary in van der

Wouden [1997, 113-130]). In this context, Horn's (2013, 1) review of research on positive-*anymore* categorizes negative-*anymore* as a "medium-strength" NPI. Edmondson (1983) also proposed a hierarchy of affective contexts for NPIs that runs from negative to interrogative to conditional to comparative (summarized in van der Wouden 1997, 94-95).

Giannakidou (2011) included downward entailing contexts in a broader set of nonveridical contexts that licenses a "broad" class of NPIs. Nonveridical contexts also include modal, intensional, and generic contexts, disjunctions, questions, imperatives, and conditionals (Giannakidou 2011, 1679). This broad class is opposed to a narrower class of NPIs that appear only in overtly negative contexts. Additionally, Giannakidou (2011) proposed a secondary operation of "rescuing" that allows some non-licensed NPIs to be used via semantic-pragmatic reasoning. Rescuing specifically allows English *any* to be licensed in apparently veridical contexts like *only*, *rarely*, *barely*, (etc.) through a clash between veridical and nonveridical inferences that renders both inferences (Giannakidou 2011, 1687, uses Horn's [2002] term) "assertorically inert." Horn (2016), however, challenges that Giannakidou's concept of rescuing makes many incorrect predictions about NPI licensing, for instance, allowing *almost* to license NPIs while blocking *only* from licensing. Instead, he describes a role for calculating assertoric content of utterances in NPI licensing.

Horn (1970) was apparently first to examine positive-*anymore* from the perspective of semantic research on NPIs, noting "the dialectal use of non-polarity *anymore*" that carries a negative presupposition (i.e., the sentence "Floyd always thinks he is right anymore" presupposes "Earlier, he didn't always think he was right" [Horn 1970:320]). Hindle and Sag (1975) followed a similar line, claiming that positive-*anymore* asserts 'now' but presupposes a

contrast with past events. Since the proposed assertion and presupposition for positive-*anymore* is not noticably different from what negative-*anymore* would assert and presuppose, Hindle and Sag (1975, 92) suggest that positive- and negative-*anymore* are not distinct lexical entries, but rather a result of "various speakers differing simply on how picky they are about the receptiveness of an environment" for licensing *anymore*.

Their notion of a continuum is suggestive of Edmondson's (1983) hierarchy of affective contexts or Zwarts's (1998) weak, strong, and superstrong NPIs. Research into speaker intuitions about the grammaticality of *anymore* has certainly shown that some types of sentences and some constructions are more acceptable than others. Hindle and Sag (1975), for instance, found that respondents agreed in rejecting a small number of the "worst" positive-*anymore* sentences and accepting the best. However, respondents also showed little agreement in the relative acceptability of other instances of *anymore*. Youmans (1986, 73), too, identified differences in acceptability:

> The highest ratings were given to a negative and to a *yes/no* question. Next highest were sentences with *anymore* embedded in verbal complements following adversatives, such as *reluctant*, or words with a negative prefix, such as *impossible*. [...] Even Positive speakers would be likely to reject the preposed negative *anymore* in "Anymore, I never go to the movies."

In the scope of the complex literature on NPIs generally and positive-*anymore* specifically, and foreshadowing discussion of grammaticality judgments of positive-*anymore* to

follow, it is worth noting disagreements in linguistic research over what counts as positive-*anymore* or what is acceptable under positive- and negative-*anymore* grammars. Horn (2013, 1-2) notes that two of the Oxford English Dictionary's citations for positive-*anymore* in fact occur in "garden-variety, downward-entailing, NPI-licensing environments" of *only* and the restrictor of *everything*. Labov (1973, 74) characterizes the sentence "It's hard to do that anymore" as "out of the question" for negative-*anymore* dialects, but Youmans (1986, 73) intuits the sentence to be acceptable, including *hard to* among Klima's (1964) category of adversatives. At an even more nuanced level, Horn (1970, 325) accepts "It's hard to find a good man anymore" as standard negative-*anymore*, but considers "Finding a good man is hard anymore" and "A good man is hard to find anymore" to be acceptable only in positive-*anymore* dialects. Horn (1970, 320) also disagrees with Youman's (1986, 73) finding that preposed *anymore* is unacceptable in a negative clause, claiming that positive-*anymore* speakers find the sentence "Anymore, they don't make 'em like that" "totally unobjectionable." Labov's (1973, 73) survey respondents laugh at the exchange, "When was the best beer brewed? Anymore." But Murray (1993, 182) reports informants using the identical structure in "[Do you eat red meat?] Anymore."

This brief survey of ideas about the meaning of positive-*anymore*, as well as the semantics and syntax of NPIs more generally, shows positive-*anymore* to be a rich site for research, with many findings yet to be discovered. A starting point is to recognize that a range of licensing conditions must be examined if positive-*anymore* is to be understood, and that innovations represented by positive-*anymore* need to account for syntactic, semantic, and pragmatic factors, and for the interactions among them.

Positive-*Anymore* in American Speech

Positive-*anymore* was described anecdotally in *American Speech* frequently after Malone (1931). Authors and letter-writers identified it in West Virginia (Malone 1931; Lyman 1936, 63; Krumpelmann 1939, 156); southwestern Pennsylvania (Maxfield 1931, 19); southern Ontario and Michigan (Ferguson 1932); Illinois (Carter 1932; Nock 1959, 157); Elmira, NY (Greet 1935, 160); South Carolina (McCain 1939, 304); Iowa and Maryland (Russell 1941, 18-19); Philadelphia (Tucker 1944, 39); Indiana (Gibbens 1944, 204; Krueger 1965, 159); and, in Dunlap (1945, 15), every region of the United States and Canada except New York City, Long Island, New England, and Nova Scotia.

It is noteworthy that citations offered by these authors include positive-*anymore* in clause-initial, -medial, and -final positions, suggesting that all of these constructions have long time-depth. Eitner (1949, 311) noted that Wentworth's *American Dialect Dictionary* of 1944 included fifty-nine examples of positive-*anymore*, including five clause-initial occurrences, ten clause-medial, and forty-four clause-final.

A lineage of subsequent surveys employed greater sophistication for mapping positive-*anymore*, but still generally concluded that the feature is widespread, especially in the traditional US Midland. Wolfram and Christian (1976) documented it as part of the grammar of Appalachian speech. The *Dictionary of American Regional English* (*DARE*; Cassidy 1985-) plotted a concentration of positive-*anymore* being judged as grammatically acceptable in Kentucky and Indiana, but with scattered usage throughout the Midwest, Pacific Northwest, New York, Texas, and Oklahoma (vol. 1, Map 73, included in Horn 2013, 2; see also responses to the elicitation, "People used to walk a lot, but everybody drives a car __" at

http://dare.wisc.edu/survey-results/1965-1970/time/a26). Youmans (1986) examined positive-*anymore* in Missouri and Shields (1997) in southeastern Pennsylvania. Murray (1993) showed a cline of acceptability judgments throughout the US Midwest for fifteen sample sentences with positive-*anymore*. Coye (2009, 421) found that positive-*anymore* was frequently acceptable in southern New Jersey, but unacceptable north of a line of demarcation between Trenton and Atlantic City. Strelluf and Cardwell (forthcoming) identified race as a predictor of grammaticality judgments for positive-*anymore* in Kansas City, associating judgments of "heard but don't use" with white informants and "never heard" with African Americans.

The TELSUR project surveyed respondents on the acceptability of three positive-*anymore* sentences, and plots a positive-*anymore* isogloss around the *Atlas of North American English*'s (*ANAE*) Midland region, as well as the upper area of the South and a subsection of the West (Labov, Ash, and Boberg 2006, 293-294; see also Ash 2006 for a focused examination of the *ANAE* data specifically in the context of the US Midland). Murray and Simon (2006) included positive-*anymore* as one feature in a constellation of lexical, phonological, and morphosyntactic features that mark the Midland as a distinct dialect region. The *Harvard Dialect Survey* (*HDS*; Vaux and Golder 2003, Maps 54-57) plots acceptability judgments for four positive-*anymore* questions; however, the distribution of mapped responses makes it difficult to conclude much more than that positive-*anymore* is judged to be acceptable across much of the United States, but more frequently judged unacceptable. (See Maher and McCoy [2011] for additional positive-*anymore* mapping.)

While the acceptability and presence of positive-*anymore* are well established in some varieties of American English, though, explanations for its acceptability and presence in those

varieties (but not in others) remain unsettled. Dunlap (1945) connected positive-*anymore* to Ulster migrations. Eitner (1949, 314-315), likewise attributed positive-*anymore* to Scotch-Irish settlement, rejecting H.L. Mencken's attribution to German immigrants and Tucker's (1944) to Welsh immigrants. Eitner noted citations for positive-*anymore* in the *English Dialect Dictionary* of 1898 and *Scottish National Dictionary*, with occurrences in Northern Ireland and Scotland (see also Crozier 1984, 318). The *OED* entry for positive-*anymore* includes a quote from *Women in Love* by D.H. Lawrence (cited in Youmans 1986, 62 and Horn 2013, 1, 2014, 337), suggesting the English East Midlands as another possible source.

Much of the literature presupposes that positive-*anymore* is spreading (e.g., Murray [1993, 185, emphasis mine] concluded, "One cannot help wondering whether its current pattern of use will continue to spread"). But there is little data that the feature actually represents a change-in-progress, either inside or outside the areas where positive-*anymore* is attested to. Youmans (1986, 74) noted, "if this usage is becoming more common, as many commentators suggest, then it is probably because Midland speech in general is spreading rather than because of innovations introduced by younger speakers." Shields (1997, 219) also found "no difference in its use between age groups" in Pennsylvania. Across American regional dialects, the acceptability judgments mapped in *HDS* and *ANAE* certainly suggest a diachronic expansion of the positive-*anymore* region compared with the *DARE* map. However, a qualitative comparison of *HDS* and *ANAE* data against Dunlap's (1945) survey leads to a more general conclusion that positive-*anymore* was geographically widely distributed in American English at the end of the twentieth century just as it was in the middle of the century.

Anymore Judgments

An interesting social feature of positive-*anymore* is that people often seem not to notice it. Labov (1973, 66) wrote that positive-*anymore* "is not a social marker or stereotype, and is not evaluated by most speakers." He cited as evidence a 1969 *Life* headline: "What it Takes to be a Lady Author Anymore" (see also Labov 1972, 309). Youmans (1986, 71) noted, "even some speakers who have lived all their lives in positive *anymore* regions claim never to have heard this form," and described his surprise at noticing during his parents' fiftieth wedding anniversary that his father used preposed positive-*anymore*.

On the other hand, Horn (2013, 8) also described a hateful response to the "extension of the meaning of *anymore*" from the *Harper Dictionary of Contemporary Usage* panel (Horn 2014, 340, also quotes Follett's *Modern American Usage* calling positive-*anymore*, "wrong"). Cox's (1932, 236) early account of positive-*anymore* implies that the feature raised prescriptivist hackles: "Composition teachers tell me that occasionally it creeps into papers written by students." Positive-*anymore* also seems to be salient as a feature of "Pittsburghese" (http://www.pittsburghese.com/ for a popular account; Johnstone 2013). By and large, though, the story of positive-*anymore* is that it passes unnoticed and unstigmatized—at least until the construction is presented for conscious evaluation, as in the cases cited by Horn (2013, 2014). Indeed, Labov (1973, 71) concluded, "*Anymore* is all about us, under the surface, but is not available for conscious judgments of grammaticality."

Because of the disconnect between positive-*anymore* usage and recognition, the *ANAE* map of grammaticality judgments to positive-*anymore* is preceded by the disclaimer:

> Considerable caution must be exercised in interpreting these data. Positive *anymore* shows a disparity between intuitions and actual use. Long-term studies of positive *anymore* in Philadelphia show that the great majority of speakers will use *anymore* in constructions like [the survey items], when enough spontaneous speech is recorded, but only about half will recognize this construction in response to direct questions. (Labov, Ash, and Boberg 2006, 292)

ANAE's disclaimer points to a major conundrum in positive-*anymore* research. Judgments about the grammaticality of positive-*anymore* are unreliable. However, contrary to Labov's (1973, 71) description of positive-*anymore* as "all about us," positive-*anymore* actually occurs infrequently in natural speech. Indeed, Youmans (1986, 71) suggested that it was positive-*anymore*'s low frequency that made it possible for the feature to "be heard for years without registering on a listener's consciousness."

As such, elicitation techniques—whether indirect like sociolinguistic interviews or direct like "rapid and anonymous surveys" (e.g., Labov 1972) or the questionnaires of the Linguistic Atlas of the United States and Canada (e.g., Kurath 1931) and *DARE*—do not yield enough productions of positive-*anymore* to study the feature. Furthermore, because positive-*anymore* could be added as an adjunct to almost any sentence, positive-*anymore* cannot be quantified as a binomial variable that alters between application and non-application, which has been a standard approach for variationist studies of grammatical features (cf. Tagliamonte 2006).

Studies of positive-*anymore* have therefore necessarily relied almost exclusively on either grammaticality judgments or anecdotal reports. A qualified exception is that Murray (1993)

included some surreptitiously documented productions of positive-*anymore* among the surveyed judgments he reports. But overwhelmingly, empirical knowledge of positive-*anymore*'s distribution and occurrence in American English is drawn from overt judgments. And overt judgments of positive-*anymore* are inherently unreliable.

Method

Anymore on Twitter

Twitter, with its massive pool of often speech-like text, offers a means to study low-frequency grammatical features like positive-*anymore*. Sociolinguists have leveraged Twitter as a rich resource for studies of language variation and change. Squires (2016b) provides an overview of approaches and issues in Twitter-based research, and the chapters collected for Squires (2016a) provide several exemplary applications. Eisenstein (2017) demonstrates the usefulness of Twitter for mapping lexical variables associated with particular dialect regions (see also Eisenstein et al. 2012; Pavalanathan and Eisenstein 2015). Jones (2015) maps regional varieties of African American English based on lexical and spelling variants (see also Austen 2017). Doyle (2014) showed that Twitter could also be leverage to study low-frequency grammatical features, as he used his tweet mapping script, SeeTweet, to plot 480 instances of *needs done* in tweets in the United States.

For the present study, I built a corpus of tweets using R (R Core Team 2017) and the package twitteR (Gentry 2015). The twitteR package interfaces with the standard-level, public set of APIs in the Twitter developer platform (e.g., Twitter 2017). Calls to Twitter's standard search return a non-exhaustive sample of tweets containing relevant search strings and published

within seven days of running the search. The twitteR package makes these calls to search Twitter and pulls the outputs as text into R, where the tweets can be converted to a spreadsheet or other file for coding and analysis.

I extracted tweets containing the word *anymore* daily from November 8 to December 8, 2016. I searched 75-mile radii around five cities described in the context of the *ANAE*'s Midland dialect region: Columbus, OH, Indianapolis, Pittsburgh, Kansas City, and St. Louis. I also searched three cities representative of other *ANAE* dialect regions: Birmingham, AL (South), Chicago (Inland North), and San Francisco (West). The Midland cities were selected to provide coverage across most of the east-to-west range of the Midland. The search radius was set at 75 miles to capture as much area as possible without overlap. The three non-Midland cities were selected not only for their dialect region assignment, but also because of their varied distance from the Midland dialect region. Inland North Chicago, for example, is closer to Midland Indianapolis than Indianapolis is to Midland St. Louis. Birmingham is about twice as far from the Midland, north-to-south, as Chicago is, while San Francisco is around 1800 miles west of Kansas City. The search parameters were therefore intended to afford several geographic perspectives on *anymore* productions: distributions within the Midland, regional comparisons of Midland cities against non-Midland cities, and a straightforward geographical view (i.e., in case Chicago's proximity to the Midland correlated with a greater proportion of positive-*anymore* than occurs in San Francisco).

The geocode parameter in Twitter's search API returns results for users who include location metadata in tweets (i.e., geotags), but also returns results based on the location that Twitter users enter in their profiles. User-provided locations are inexact since users may enter

any place they wish and may not update their location if they move. Certainly, some tweets I collected for locations were not tweeted by people in those locations. For instance, several tweets pulled from Birmingham, AL contained references that suggested the authors were actually in Birmingham, United Kingdom.

Many tweets, however, contained local references that showed authors very clearly to be within the cities I hoped to study. So tweets identified in this study can only offer qualified insights into regional distributions of positive-*anymore*, but they still offer insights. It was necessary to rely on user-provided locations rather than geotagging because the vast majority of tweets are not geotagged. Leetaru et al. (2013) report that only 1.1 percent of tweets are geotagged (Eisenstein [2017] similarly reports 1 to 2 percent of tweets being geotagged). In the corpus I built for this research, only 191 tweets (about 0.2 percent of the sample) were geotagged. Given the low frequency of positive-*anymore*, these small numbers effectively preclude studying the feature through Twitter in the same way that it has been difficult to study it in speech.

A Twitter-based sample is fraught in a number of other ways. Beyond being limited obviously to Twitter users (about 18 percent of internet users according to Duggan and Smith [2013, 5]), Twitter is used disproportionately by African Americans and 18 to 29-year-olds. Results reported from Twitter will therefore not be demographically representative of the speech communities they are drawn from, and differences in the social characteristics of Twitter users in a specific speech community might create the appearance of a regional difference that is actually a result of social factors. I did not extract any metadata on tweeters' social characteristics, and make no attempt in this research to control for or examine any demographic characteristics

besides location. Social categorization of Twitter data on positive-*anymore* may be fruitfully examined in future research.

How Coding *Anymore* Is Done

From the initial pool of data-mined tweets, I manually deleted tweets where *anymore* occurred in song titles or lyrics (popular songs during the collection period included "We don't talk *anymore*" by Charlie Puth and Selena Gomez and "*Anymore*" by Travis Tritt); quotes attributed to public figures (Scottie Nell Hughes said, "There's no such thing, unfortunately, *anymore* as facts," during collection); and advertisements (the click-bait "7 Signs Your Boyfriend Is Just Not Into You *Anymore*" was tweeted frequently). I also deleted repeated tweets (i.e., because an author was resending a tweet with different call-outs, or engaging in flaming or trolling). I deleted tweets where interpretation was not possible, often because a tweet with *anymore* appeared to be a continuation of previous message so there was insufficient text to evaluate polarity licensing, or because content suggested that an author had likely accidentally omitted a negative particle as in (5):

(5) Bro are you serious right now bc we might get to be friends *anymore* (Birmingham, Nov. 22)

Finally, it was necessary to distinguish *anymore* being used to express a quantity from adverbial *anymore*. The importance of this is illustrated by a sentence like (6):

(6) Oh my god I couldn't love you *anymore* if I tried (Indianapolis, Nov. 15)

The audience of (6) is unloved if *anymore* is an adverb, but loved a lot if it is a quantity. Since positive-*anymore* is an expansion of the grammaticality of adverbial *anymore*, I deleted 3408 tweets where I judged it likely that *anymore* was being used to express quantity. On a related point, I did not include the prescriptive two-word spelling, *any more*, in my searches because I found during exploratory work that the form was used overwhelmingly to express quantity. An anonymous reviewer rightly points out that this decision may have excluded relevant instances of positive-*anymore*.

These procedures resulted in a corpus of more than 80,000 instances of *anymore*. I coded each token of *anymore* for the negative polarity item (NPI) trigger that licensed it. Initially, I followed a set of ten categories of NPI trigger from a guide by John Lawler (e.g., http://www.umich.edu/~jlawler/NPIs.pdf). Following recommendations from anonymous reviewers, I made several additional passes through all the tokens that were not licensed by an overt negative marker and recoded according to a finer-grained set of NPI triggers, following several works in the semantics of negation, most notably Klima (1964), van der Wouden (1997), and Giannakidou (2011). These sequential re-examinations of the dataset resulted in twenty NPI triggers. These are listed in Table 1 along with the types of words or structures that would yield a coding of each NPI trigger and examples from the corpus.

Table 1. NPI triggers

NPI trigger	Example trigger	Example tweet
overt NEG	*-n't*, *no*, *not*	(7) ugh.. I don't want to be on this phone *anymore*

		(Birmingham, Nov. 22)
WH-question	*What, Where*, etc.	(8) lol who takes a cab *anymore*? (Pittsburgh, Dec. 1)
polar question	*Do*, *Should*, etc.	(9) Wtf!? Do liberals even know what they stand for *anymore*? Smh. This is why we have to #MAGA (Pittburgh, Nov. 13)
if-conditional	*if*...	(10) this would be funny if she was at all relevant *anymore* (Birmingham, Nov. 9)
NEG-affix ADJ	*in-*, *un-*, *-less*, etc.	(11) NFL is unbelievable *anymore*. (Columbus, Nov. 8)
negative frequency	Adverbs: *rarely*, *barely*, *seldom*, etc.; Adjectives: *rare*, etc.; Noun: *rarity*	(12) I barely even pay attention *anymore*. Lost interest. #usmnt (San Francisco, Nov. 21) (13) Good days are so rare *anymore* (Pittburgh, Nov. 18)
inherent negative	Verbs: *refuse*, *doubt*, etc.; Nominalized inherent neg V: *a struggle*, *doubts*, etc.	(14) I refuse to loose in 8 ball *anymore* (Indianapolis, Nov. 24) (15) in all seriousness I have doubts as to whether 87-year-old Chomsky remarks are even Chomsky *anymore*, let alone anarchist. (San Francisco, Nov. 26)
only/just ADV	*only*, *just* modifying verb	(16) Convinced Ohio State only wins *anymore* because they have the power of LeBron on their side (Columbus, Nov. 26)
negative quantity	*only*, *few*, *little*, etc. modifying noun	(17) You're really the only thing that makes sense *anymore*. (Kansas City, Nov. 28)
comparative	Comparative: *-er, more than;* Superlative: *-est*, *most*; Preference: *rather*, *prefer*	(18) I love giving gifts more around Christmas time than receiving them *anymore*. (St. Louis, Nov. 29) (19) That feeling of dread when Cutler is under center is gone. I'd rather fail with someone else than live with Cutler *anymore*. (Chicago, Dec. 5)
too	*too* modifying adverb or adjective	(20) lmao right? too stressed to care *anymore* ya feeeeeeel (Chicago, Nov. 21)
all+NP	*all* modifying noun, often in subject position	(21) all I want is guac *anymore* (Chicago, Dec. 4)
(downward entailing) preposition	*beyond*, *without*, etc.	(22) this is beyond my ability to understand *anymore* (Kansas City, Dec. 7)
counterfactual	sarcastic expressions, including *I could care less*	(23) @politico like you have any credibility *anymore* (St. Louis, Dec. 5)
adversative	Adjectives: *hard*, *difficult*, etc.; nominalized adversative and NEG-affix ADJ: *inability*, *difficulty*, etc. Also: *a joke* as noun complement	(24) so hard to keep track *anymore* (Indianapolis, Dec. 6) (25) Sadly, it's almost as if social media has contributed to society's inability to debate *anymore*. No win (St. Louis, Nov. 13) (26) This is a bad joke *anymore* (Indianapolis, Dec. 3)
negative affect ADJ	Emotionally negative adjectives: *scary*, *boring*, *awful*, etc.; non-morphemic *dis-*	(27) The @nfl trash af *anymore* (Columbus, Nov. 30)
negative affect V	Emotionally negative verbs: *suck*, *hate*, *piss*	(28) Weekends suck *anymore* (Columbus, Nov. 12)

	off, etc.	
positive quantity	*almost all*, *a lot of*, *so much*, etc. modifying noun; Adverb: *always* *any*-PRONOUN as universal quantifier with no other trigger; universal quantifier: *everything, everyone*, etc.	(29) this is what almost all my convos look like *anymore* (San Francisco, Nov. 22) (30) I love always having plans *anymore* (Columbus, Nov. 14) (31) That's anything *anymore*. You don't notice the increased radio ads? Billboards going up? You adapt or get left behind. (Kansas City, Nov. 24) (32) Kelce is dropping everything *anymore*. The heck is going on. (Kansas City, Nov. 28)
intensifier	*so*, *such*, *fucking*, etc.	(33) you're seriously so annoying *anymore*. (Chicago, Nov. 23)
no trigger	none	(34) I live on Pinterest *anymore* (Columbus, Nov. 18)

The list of NPI triggers in Table 1 reflects a series of principled compromises to make the best possible use of a large and inherently messy natural-language dataset. I will detail those compromises here, as well as reasoning behind them.

As an overarching principle, I deemed it crucially important that this research not rely on judgments of whether any given instance of *anymore* was polarity-negative or -positive. I grew up in the presumably positive-*anymore* speech community of Kansas City, so my judgments are inherently suspect. But the disagreements noted above over the polarity of particular instances of *anymore* among language experts from, at least in some cases, negative-*anymore* dialect areas (e.g., William Labov and Gilbert Youmans, Laurence Horn and *OED* editors) cast doubt on the prospect of anyone successfully categorizing many natural-language instances of *anymore* for polarity. This doubt is reinforced by Hindle and Sag's (1975, 92) suggestion that differing judgments about positive-*anymore* reflect a continuum of "how picky" speakers are about licensing restrictions rather than a difference in discrete dialects. As such, I tried to remove judgment from the coding process, and to rely instead on the presence of discrete lexical NPI triggers to categorize tweets (or, syntactic NPI triggers in the case of WH- and polar questions,

and pragmatic in the case of counterfactual). The importance of this commitment is illustrated by several of the example sentences in Table 1, including (11), (16), (18), (21), and (24)-(26), which —to my suspect positive-*anymore* dialect, at least—allow either a negative- or positive-polarity interpretation. The NPI trigger coding scheme detailed in Table 1 was developed to remove such judgments from the study.

While following this principle removes the reliance on problematic polarity judgments, it introduces another problem when an *anymore* clause contains more than one potential NPI trigger. For example, I have coded (10) as *if*-conditional because of the overt occurrence of *if* at the start of the clause "if she was at all relevant *anymore*." However, the clause is also semantically counterfactual. Or it could be an embedded polar question, "Is she at all relevant?" The NPI *at all* could also potentially license *anymore*, necessitating an additional trigger category. This messiness is a natural consequence of studying a large set of natural-language data rather than isolated citations and constructed examples. Of course, this could be addressed by coding clauses for multiple triggers (i.e., to account for "secondary triggering" or "parasitic licensing"—see, e.g., Horn 2001, 181; den Dikken 2006; Hoeksema 2007). But in a sample of more than 80,000 tweets, doing so was not feasible. Coding for multiple NPI triggers would arithmetically increase the time required to code each tweet and enormously complicate statistical modeling. It would also introduce additional levels of dubious interpretation into the dataset, as it would frequently be necessary to guess at authorial intent or to probe Twitter conversations and exchanges in ways that would push the limits of research ethics for subject privacy.

I therefore risked doing damage to the dataset by selecting a single NPI trigger for each instance of *anymore*. Following conceptually on Edmondson's (1983) hierarchy of affective contexts, as well as Giannakidou's (2011, 1674) distribution of *any* sanctioning environments, I attempted to code according to the "strongest" overtly present NPI trigger. Table 1 is arranged roughly according to the hierarchy that I followed—though, in practice, there are certainly instances of NPI triggers in the middle of the hierarchy where I made interpretive judgments about licensing that deviated from the strict ordering in Table 1.

Relatedly, I note that the NPI triggers in Table 1 were arrived at inductively over multiple iterations of analysis to best represent the dataset, rather than to examine all possible NPI triggers. For instance, within the NPI trigger comparative, I initially coded separately for superlative (N=11), adverbs of preference (N=7), and verbs of preference (N=1). However, the counts of these were very small, so I collapsed these categories into the larger category of comparative (grouping, in this case, according to Lawler's miscellaneous category of NPI triggers). Similarly, negative frequency includes the erstwhile separate NPI triggers of negative frequency adverbs, adjectives, and nouns. I completed a full analysis of the dataset (as below), and found that these NPI triggers all performed identically. Given the semantic similarity between, e.g., *rare*, *rarely*, and *rarity*, the lack of analytic insights from distinct categories justified collapsing these into one NPI trigger.

I also deleted four instances of *anymore* in the environment of the restrictor of a universal quantifier, as in (35). This position standardly licenses NPIs. But the tiny set of four tweets (two from Chicago and one each from Columbus and Pittsburgh) creates problems for modeling, and I could not find a defensible way to combine the trigger with another category of NPI trigger.

(35) my face every time I open Twitter *anymore*. (Chicago , Dec. 2)

This inductive approach also yielded categories like intensifier. I am not familiar with anything in the literature on NPIs that suggests intensifiers should license NPIs. Instances of *anymore* triggered by intensifier are almost certainly polarity-positive. Likewise, the category positive quantity should not license true NPIs. Intensifiers and positive quantity markers occurred so frequently with *anymore* in the corpus, however, that I deemed it appropriate to quantify these separately from the category of no trigger.

My avoidance of interpreting semantic content of tweets also precluded quantitative examination of the affective content of messages containing positive-*anymore*. Youmans (1986, 73, citing a conversation with William Labov) suggests that positive-*anymore* (usually but not always) "implies a negative attitude toward the state of affairs reported," so that positive-*anymore* might retain "some of its association with negation." Horn (2013, 6) similarly notes that a prepondence of positive-*anymore* occurrences in corpora and dictionary entries are "emotively negative," making negative affect "a characteristic (though not ineluctable) feature of positive *anymore*" (see also Horn 2014, 338-339).

I collected many positive-*anymore* tweets written with emotionally positive or neutral affect, as in (36)-(38), as well as (30) and (34) in Table 1.

(36) I'm cool on it *anymore*. (Columbus, Nov. 13)

(37) We need 2-3 minute clips *anymore*..the show is expanding..food part should be 1 or 2 mins..his foodie wisdom is magic!! (Pittsburgh, Dec. 6)

(38) Stafford playing how we expect *anymore*. Looking good. (St. Louis, Dec. 12)

However, the overwhelming impression from the corpus is that positive-*anymore* is usually used in complaints and other emotionally negative contexts, just as indicated by Youmans (1986) and Horn (2013, 2014). This impression of emotional negativity is strongly reinforced by several of the environments that license *anymore*, such as those I have labeled counterfactual, adversative, and negative affect ADJ and V, which are naturally conducive to expressing negative emotional states.

While I initially hoped to examine the emotional contexts of positive-*anymore* in this paper, it quickly became clear that it would not be possible to code the entire corpus for emotional affect. While many tweets are obviously emotionally negative or positive, many others —like (39)-(41)—seem like they are probably complaints, but it is easy to imagine contexts where they would be emotionally neutral or positive.

(39) 3 nurses on night shift seems to be the norm *anymore* (Pittsburgh, Nov. 18)

(40) 2 a.m. is my 8 p.m. *anymore* like (Columbus, Dec. 6)

(41) ahah it's a tradition *anymore* (Pittsburgh, Dec. 8)

As was the case for coding polarity, I deemed it ethically problematic to probe the conversational and situational contexts of tweets in order to make judgments about emotional

affect, and anticipated that doing so would still leave a large number of tweets where emotional affect was ambiguous (or scalar, i.e., necessitating establishing the degree of emotional affect in a given tweet).

Moreover, tweets coded for overt NEG also give the impression that standard NPI-*anymore* overwhelmingly occurs in emotionally negative contexts. It may then simply be a practical matter that people tend to use *anymore*, whether in polarity-negative or -positive scope, frequently when they are complaining. This would be a matter of usage, rather than a matter of negative-*anymore*'s syntactic connection to negativity being transferred to the semantic domain of positive-*anymore*. To check whether positive-*anymore* occurred at relatively higher or lower frequency in presumably syntactically positive environments such as positive quanity, intensifier, and no trigger, it would also be necessary to establish the frequency with which negative-*anymore* occurs with emotionally positive and negative affect in the scope of standard NPI-licensing triggers like overt NEG, negative frequency, and inherent negative. In other words, it would be appropriate to apply the problematic coding scheme to the entire corpus. While that work might contribute valuably to knowledge of positive-*anymore* and its connection to emotional affect, it was not feasible at this stage.

I own that this is an imperfect coding scheme. Future research may interrogate it, and other datasets may dictate different coding decisions. Even within the present dataset, it is likely that new insights about *anymore* may be gleaned from finer-grained examination of specific NPI triggers or from recoding clauses according to different or more exhaustive lists of single or multiple NPI triggers.

For the purposes of conducting the first large-scale, production-based study of positive-*anymore*, though, the coding scheme I followed at least offers a replicable and manageable approach to the data. I offer qualified support for this coding scheme in the context of the present dataset from the fact that, over multiple passes through the results presented below—using as few as ten NPI triggers and as many as twenty-six—the findings from the data remained fundamentally the same. I also note that, where there are flaws in the coding scheme, because of the objectivity built into it, the flaws will have been applied consistently across the dataset. So, for instance, if any given NPI trigger is problematic, it will be similarly problematic across all eight cities.

The counts for each NPI trigger in each city appear in Appendix A. In total, they categorize 80,364 instances of *anymore*. Overt NEG is by far the most common NPI trigger, but the sample still contains 5642 instances with non-overt NEG NPI triggers, including 442 in likely polarity-positive environments like positive quantity, intensifier, and no trigger.

I also coded for the position where *anymore* occurred within a clause, whether "initial," "medial," or "final." These clausal positions are exemplified by sentences (2), (3), and (4), respectively. I deleted sixteen tweets where *anymore* sat between a pair of clauses, and was equally interpretable as either ending the first clause or beginning the second clause. Appendix C shows counts of *anymore* in each clausal position by city.

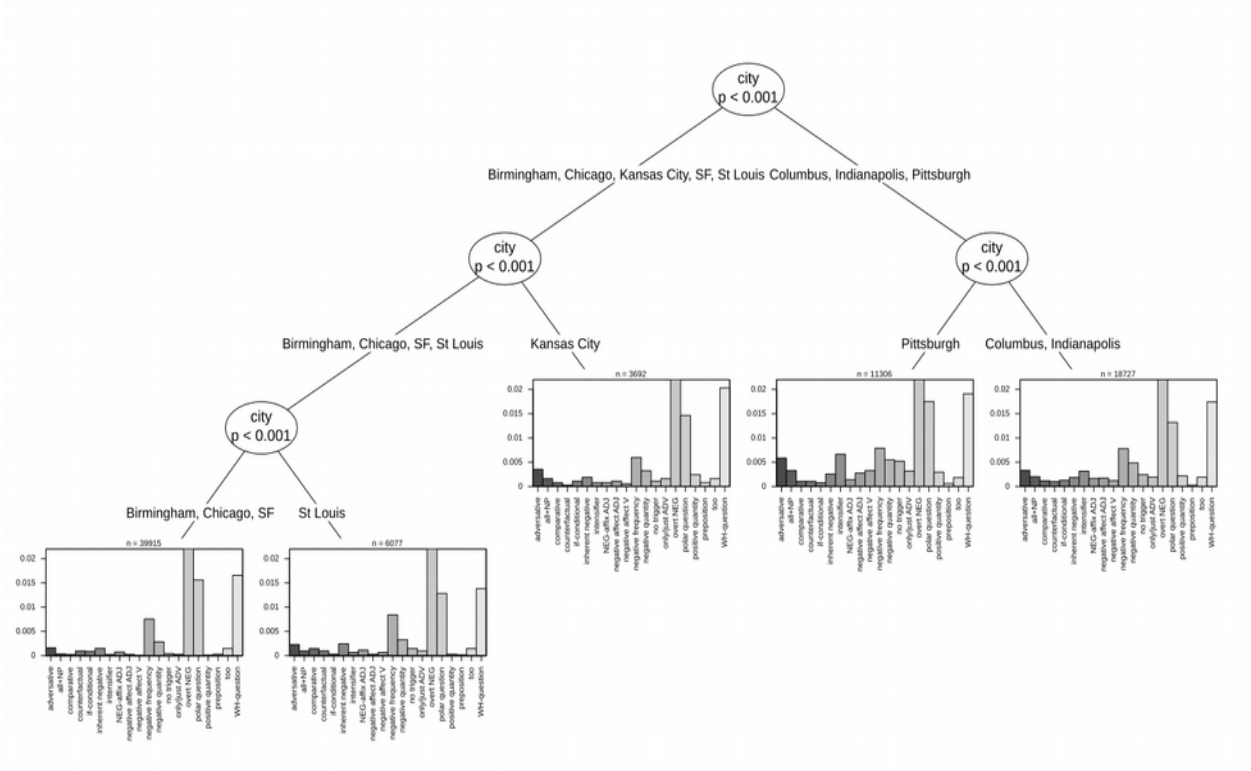
Results

Anymore and NPI Triggers

Because the sample is overwhelmingly dominated by *anymore* in clause-final position, the first pass through the data is limited to clause-final *anymore*. The relationship between NPI triggers and the cities where tweets originated is examined in Figure 1 by conditional inference tree. Conditional inference trees mine responses to a dependent variable for statistically significant predictors. When significant predictors are found, responses are split at the factor with the lowest *p*-value, forming a node with two branches of data. Each branch is then further examined for significant predictors. The process repeats recursively until all significant splits are exhausted. The process forms a hierarchical explanation for responses to a variable, offering a very quick, intuitive way to mine large datasets for interactions. Conditional inference trees were introduced as a tool for sociolinguists by Gordon *et al*. (2004), and have since been used in sociolinguistic studies of grammar (e.g., Tagliamonte and Baayen 2012; Stange 2017; Schnell and Barth 2018) and sound change (Chevalier 2016; Bekker and Chevalier 2018). I used the ctree() function (Hothorn, Hornik, and Zeileis 2006) in the "partykit" package (Hothorn and Zeileis 2015) for R to generate conditional inference trees.

The tree shown in Figure 1 for clause-final *anymore* can be read as showing which cities behave similarly or differently relative to others with regard to NPI trigger counts. The barplots at the terminal nodes are zoomed to make the low-count NPI triggers at least slightly visibile. (On this view, the overt NEG counts would extend beyond the barplots by an order of roughly 4,500.) The actual proportions of the NPI triggers are less important at this stage than the way the tree groups them according to cities.

Figure 1. Proportions of NPI triggers for clause-final *anymore* with city as predictor



It is immediately striking in Figure 1 that the non-Midland cities of Birmingham, Chicago, and San Francisco—despite being geographically distant and assigned to different dialect regions in *ANAE*—group together. This suggests that *anymore* occurs with various NPI triggers at similar rates in the three non-Midland cities, and that the occurrences of *anymore* with these NPI triggers in the non-Midland cities is different from the Midland cities.

It is also noteworthy that the Midland cities do not cluster together in a unified node in the way that the non-Midland cities do. Kansas City and St. Louis initially split from Columbus, Indianapolis, and Pittsburgh. Kansas City is then isolated into a node away from St. Louis and

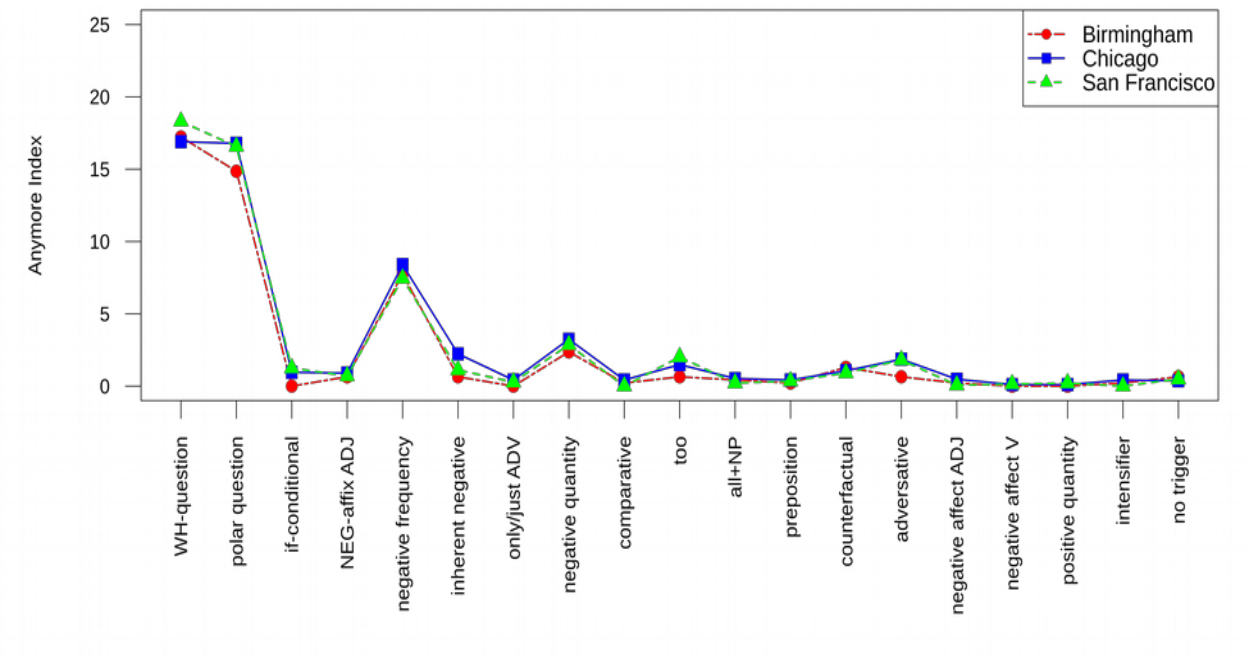
the non-Midland cities, and finally St. Louis is split from the non-Midland cities. On the right half of the tree, Columbus and Indianapolis end up in one node together and Pittsburgh in another.

The conditional inference tree in Figure 1, then, shows an association between dialect region and NPI triggers for *anymore* between Midland and non-Midland cities. At the same time, it shows differences across the Midland, with the western Midland cities of Kansas City and St. Louis being more like the non-Midland cities than are Columbus, Indianapolis, and Pittsburgh to the east. It is noteworthy at this juncture that Columbus and Pittsburgh straddle West Virginia, where positive-*anymore* was first noted to occur in *American Speech* in the 1930s, and that high levels of production in Pittsburgh match the folk linguistic claim for positive-*anymore* being part of Pittsburghese (Johnstone 2013).

To compare the rates at which NPI triggers occurred in each city, I divided the count for each NPI trigger by counts for overt NEG. For example, for Birmingham, I divided 84 WH-questions by 4,644 overt NEG to get 0.0181. Since the resulting quotients were very small, I multiplied quotients by 1000 to create a calculation I will refer to as an "*anymore* index." While using overt NEG counts to normalize counts of other NPI triggers is imperfect, overt NEG at least provides one "standard" point of reference for the number of times *anymore* might be used in a community's Twitter discourse.

Figures 2 and 3 show the *anymore* indexes for each NPI trigger by city. Figure 2 focuses on the three non-Midland cities and Figure 3 the five Midland cities. Appendix B lists the *anymore* indexes for every NPI trigger and city, as well as averaged indexes for the Midland and non-Midland cities (for reference with Figures 4 and 5).

Figure 2. *Anymore* Index by NPI trigger in non-Midland cities

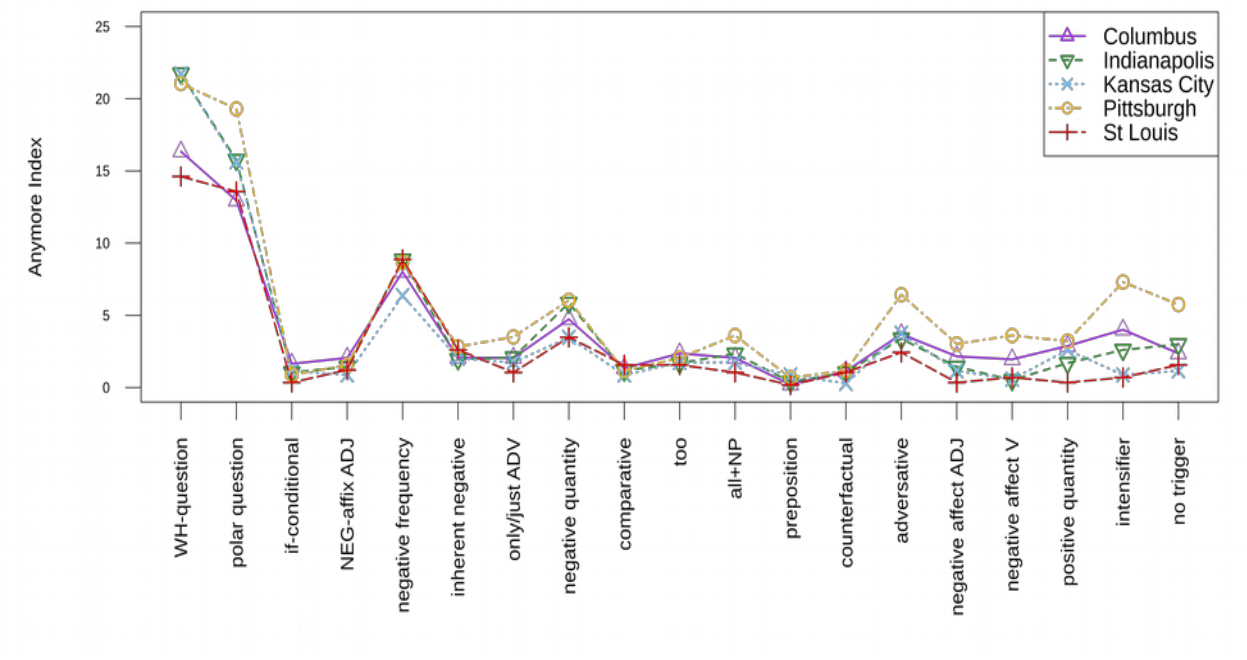


The *anymore* indexes in Figure 2 reveal the high degree of similarity in the occurrence of NPI triggers in Birmingham, Chicago, and San Francisco. Impressionistically, the line graphs for the three cities are practically identical across all NPI triggers, and especially on the right side of the graph where the most certainly positive-*anymore* licensors sit.

This contrasts with Figure 3, where differences among the Midland cities are apparent for several NPI triggers. These clearly include the positive-*anymore* contexts of positive quantity, intensifier, and no trigger, as well as WH- and polar questions and, to some extent, negative quantity and negative affect ADJ and V. Generally speaking, *anymore* indexes for Pittsburgh are at the high end of the range for each NPI trigger and St. Louis and Kansas City are on the low end. The profile of *anymore* indexes shown not only details the differences identified among

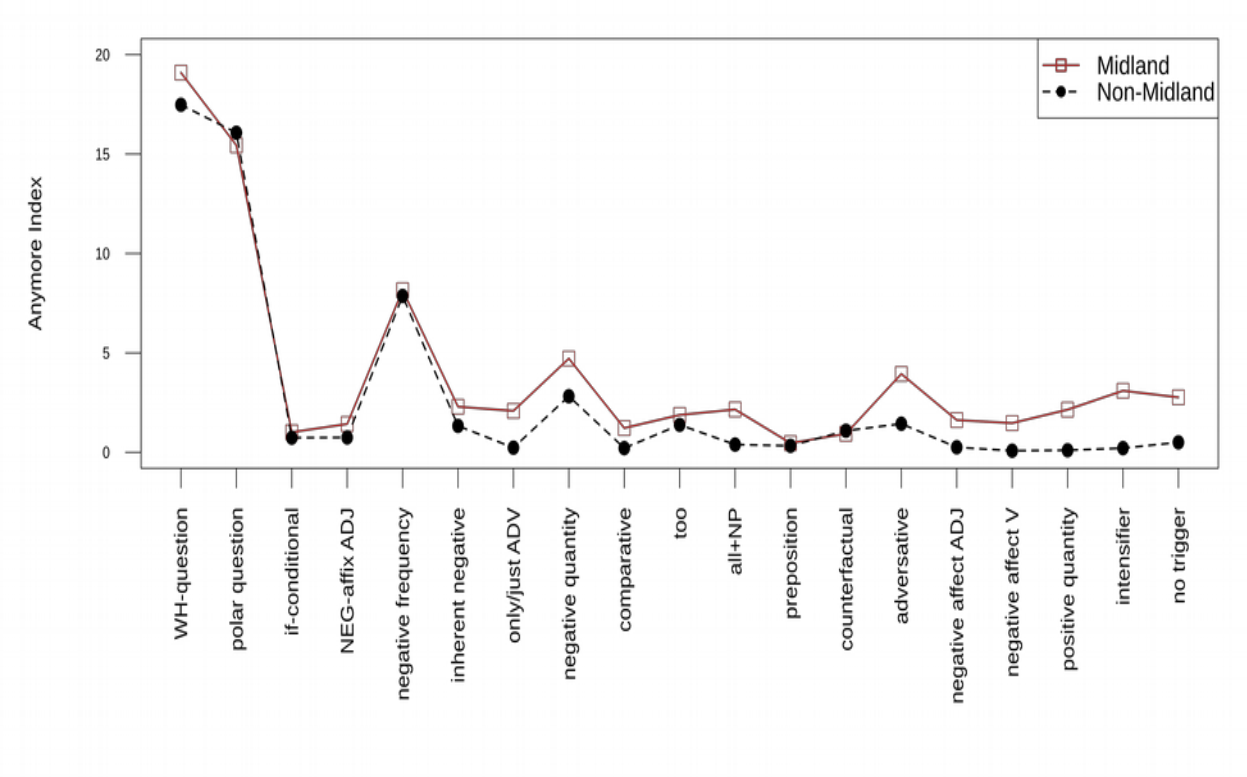
Midland cities with regard to NPI triggers by the conditional inference tree in Figure 1, but also positions Pittsburgh as a core for positive-*anymore*, with the frequency of positive-*anymore* decreasing to the west.

Figure 3. *Anymore* Index by NPI trigger in Midland cities



For cross-regional comparison, Figure 4 averages the *anymore* indexes of the three non-Midland cities into one line and the five Midland cities into another. The Midland and non-Midland lines are impressionistically very similar for a number of NPI triggers, including *if*-conditional, negative frequency, downward entailing preposition, and counterfactual. Since these NPI triggers standardly license *anymore* in all dialects of English, the similar *anymore* indexes for these triggers are unsurprising.

Figure 4. *Anymore* Index by NPI trigger, Midland vs. Non-Midland



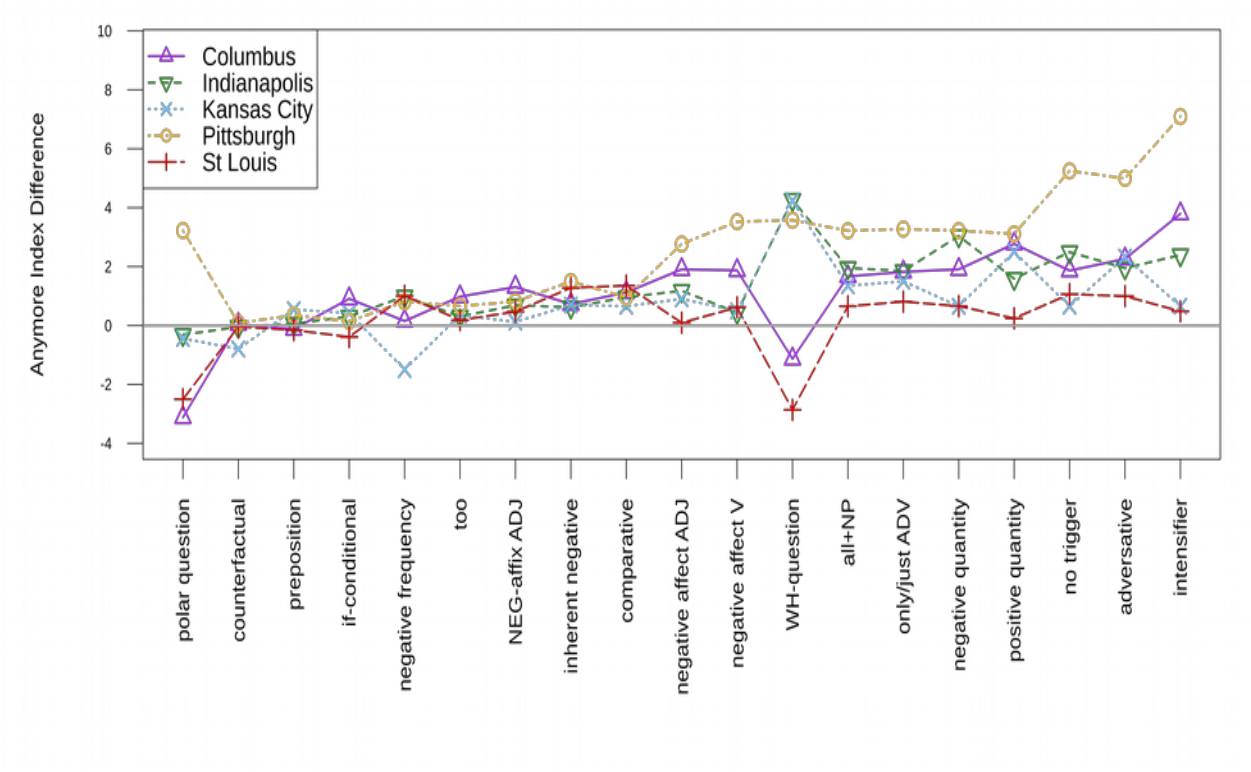
Elsewhere, *anymore* indexes are higher in the Midland. The increased Midland counts are especially clear in *only*/*just* ADV, negative quantity, *all*+NP, adversative, negative affect ADJ and V, positive quantity, intensifier, and no trigger. The greater Midland *anymore* index for positive quantity, intensifier, and no trigger again presents positive-*anymore* as a productive feature of Midland grammar.

It is also noteworthy that the Midland has higher *anymore* indexes for several NPI triggers that could license *anymore* for negative-*anymore* speakers—e.g., WH-question, negative quantity, and adversative. This suggests that in the Midland, where *anymore* is produced more

frequently in non-negative-polarity contexts, *anymore* also occurs with greater frequency in some negative-polarity contexts than it does in non-Midland cities.

In Figure 5, the averaged *anymore* index of three non-Midland cities is subtracted from the *anymore* index of each Midland city. This shows an absolute difference for every NPI trigger between each Midland city and the three non-Midland cities. The horizontal line at 0 represents identical *anymore* indexes, and points above it represent *anymore* indexes that are larger in the Midland cities than in the non-Midland cities. The NPI triggers on the x-axis are arranged in ascending value according to the difference between the average of all five Midland cities and the non-Midland average.

Figure 5. Positive *Anymore* Index for the Midland



Polar and WH-questions pattern curiously in Figure 5. Columbus's and St. Louis's *anymore* indexes are substantially less than the non-Midland cities for both polar question and WH-question, and Pittsburgh's is greater. Indianapolis and Kansas City are slightly lower for polar question, but greater for WH-question. Since questions should license NPIs generally, these differences bear additional examination.

Differences for most other NPI triggers that license *anymore* in all standard dialects are generally small. The NPI triggers that fall between counterfactual and comparative in Figure 5 show basically similar differences from non-Midland averages, though it is noteworthy that *anymore* indexes for the Midland cities are generally on the positive side of the line, reinforcing the previous observation that *anymore* occurs more frequently in the Midland in many NPI trigger contexts, and not just positive-polarity ones.

Visually, negative affect ADJ appears to mark a boundary between Midland and non-Midland *anymore* indexes. Moving to the right from that NPI trigger, Pittsburgh shows a relatively steady increase in *anymore* indexes relative to non-Midland cities. Leaving WH-question as exceptional, Columbus, Indianapolis, and, to a lesser extent, Kansas City trend upward in this section of the plot, too—though Kansas City tails toward the non-Midland average in positive-polarity contexts of no trigger and intensifier. The line for St. Louis remains mostly above the non-Midland average, but flat.

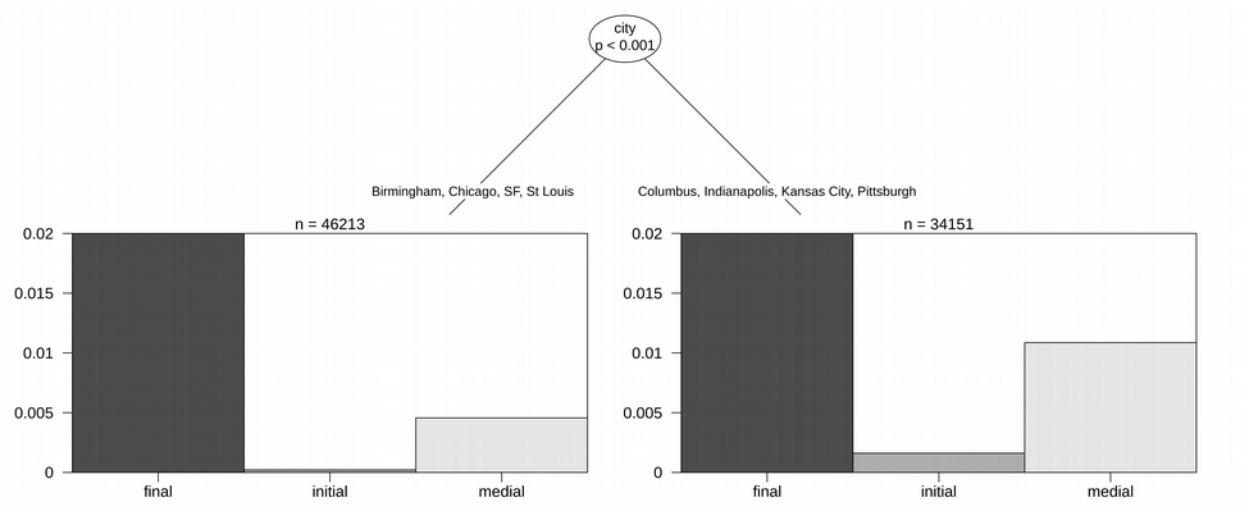
Among these NPI trigger contexts where Midland *anymore* indexes are larger than non-Midland averages is negative quantity, which should presumably license *anymore* in all dialects. This again suggests that, in speech communities where *anymore* is more frequenty licensed in positive-polarity contexts, it is also used more productively in some negative-polarity contexts.

It is worth highlighting that adversative, *only*/*just* ADV, and *all*+NP are among the Midland-preferred NPI triggers. As noted above, there is disagreement between Labov (1973) and Youmans (1986) over the acceptability of the adversative *hard* as a trigger for *anymore*, and the citations of positive-*anymore* that Horn (2013, 1-2) objects to as "ordinary (a)-list NPI *anymore*" include cases of *all*+NP and *only*/*just* ADV. The increased occurrence of *anymore* licensed by these NPI triggers may shed some light on these disagreements. From a semantic standpoint, *anymore* may be licensed by all these NPI triggers, but in this dataset, *anymore* is produced more in these NPI trigger environments in the Midland than in other dialects. *Anymore* may therefore be potentially licensed everywhere by these triggers, but "more" licensed in the Midland. They may be ordinary (a)-list *anymore* from a semantic standpoint, but more extraordinary from a sociolinguistic and dialectological one.

Anymore and Clause Position

Figure 6 shows the conditional inference tree for the clausal position of *anymore* with city as predictor. Because the sample is so overwhelmingly dominated by clause-final *anymore*, the y-axes on the barplots are zoomed to 0.02 to make the proportions of clause-initial and -medial *anymore* visible.

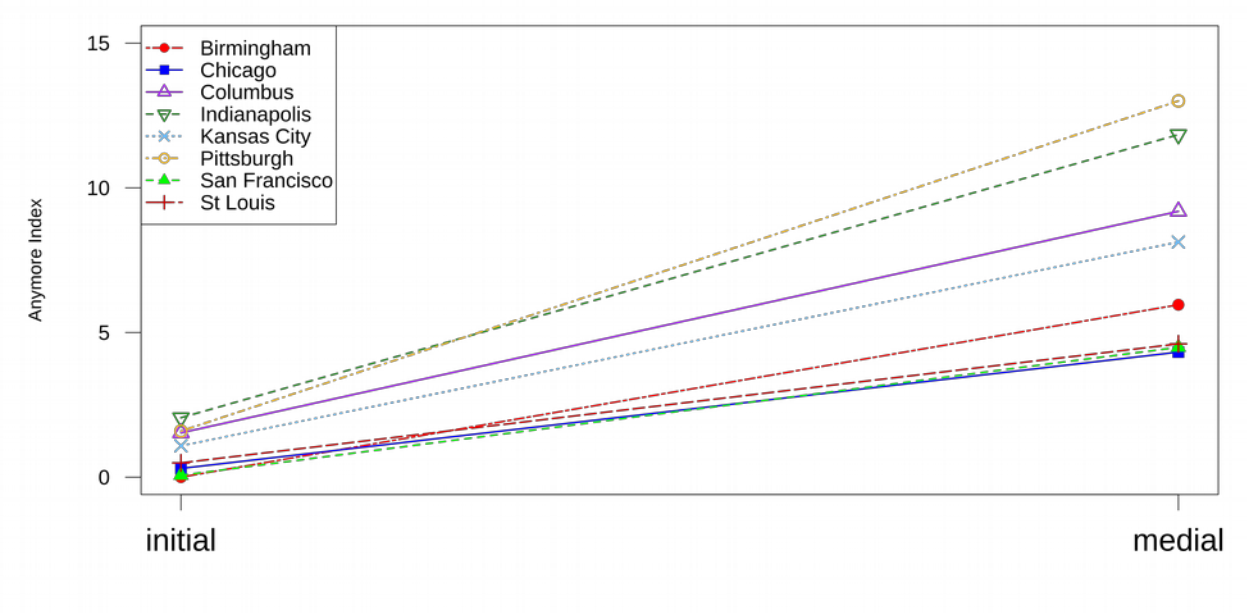
Figure 6. Proportions of *anymore* clause positions with city as predictor



The tree in Figure 6 groups the Midland cities of Columbus, Indianapolis, Kansas City, and Pittsburgh together for higher proportions of clause-initial and -medial *anymore*. The non-Midland cities are again grouped together. This model, however, adds St. Louis to the non-Midland cities, further attesting to St. Louis's marginal status as a positive-*anymore* speech community.

St. Louis's similarity to the non-Midland cities in terms of the clausal position of *anymore* is visible in the line graph in Figure 7. The graph shows a refigured version of the *anymore* index by dividing the counts of clause-initial and -medial *anymore* from clause-final *anymore* in each city. As above, the tiny quotients are multiplied by 1000.

Figure 7. Index for clause-initial and -medial *anymore* in each city



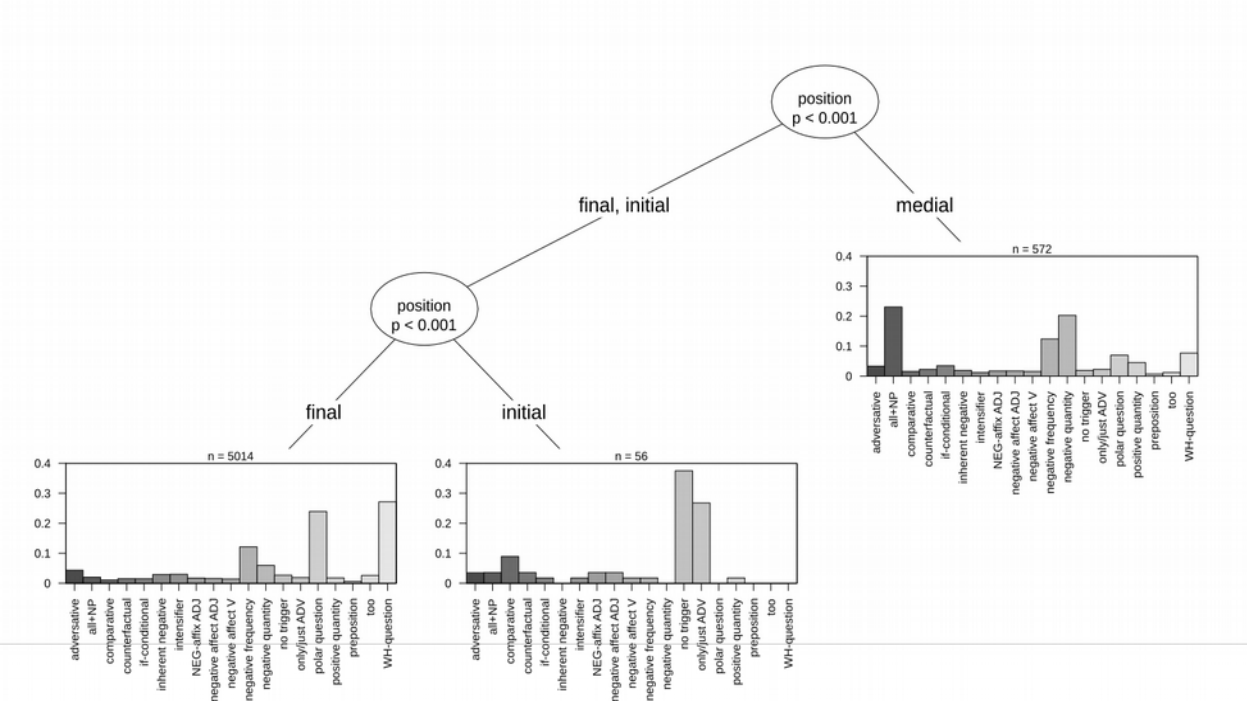
The line for St. Louis sits immediately on top of the lines for Chicago and San Francisco and just under the line for Birmingham. The other four Midland cities all show higher proportions of clause-initial and -medial *anymore* than the non-Midland cities and St. Louis. In clause-medial positions, the Midland cities show the familiar pattern of Pittsburgh having the highest index, Kansas City the smallest among Midland cities, and Columbus and Indianapolis falling in between.

Of course, it is clear from the counts in Appendix C that *anymore* is rare in positions other than clause-final. But it occurs more commonly in clause-initial and -medial positions in the Midland (St. Louis excepted), and provides additional evidence of innovative uses of *anymore* being a regional feature of Midland speech. The relative frequencies of clause-medial *anymore* also offer additional evidence of Pittsburgh as the core positive-*anymore* city, and St. Louis as being, at best, marginally Midland in terms of this grammatical variable.

Of course, it is likely that clause types are not all equal in their amenability to *anymore* in various clausal position. Interrogatives, for example, can be constructed to begin with clause-initial *anymore* (e.g., “Anymore is there much to do downtown?”), but in fact there are no such constructions in the present sample. (To be precise, as an anonymous reviewer points out, *anymore* in this clause-initial position would not be licensed by an NPI trigger at all, so clause-initial *anymore* is really better thought of as “occurring with” NPI triggers.)

To examine the relationship between *anymore* clausal positions and NPI triggers, Figure 8 shows a conditional inference tree of their interaction. Overt NEG is excluded from the model because of the overwhelming dominance of clause-final *anymore* in that trigger context.

Figure 8. Proportions of non-overt NEG NPI triggers with clause position as predictor



The tree modeled in Figure 8 picks out a significant split for each clausal position. Unsurprisingly given the counts in Appendix C, every NPI trigger is associated with clause-final *anymore*, but the proportions of questions and negative frequency ADV are especially high. Clause-medial *anymore* is triggered most frequently by *all*+NP as well as negative frequency and negative quantity. Clause-initial *anymore* is especially connected to *anymore* with no trigger, as well as *only*/*just* ADV, again pointing to that NPI trigger as a site for innovative uses of *anymore*.

Discussion

This research has presented, to my knowledge, the first large-scale study of productions of positive-*anymore*. Despite the inherently flawed nature of the Twitter corpus and the necessary compromises required to make the corpus analyzable, this study has offered fresh insights into a grammatical variable that has drawn interest for nearly a century but has not afforded quantitative studies of productions in natural-language data.

Anymore, Dialects, and Dialectology

The production data in this study confirm the association between positive-*anymore* and the US Midland. Tweets from the non-Midand cities of Birmingham, Chicago, and San Francisco show similar proportions of *anymore* across NPI triggers and clausal positions. *Anymore* is generally used in greater proportions in Midland cities with most NPI triggers, but especially in positive-polarity contexts like positive quantity, intensifier, and no trigger, as well as in clause-medial and clause-final position. Murray and Simon (2006) posited positive-*anymore* as a

distinguishing feature of Midland grammar, and productions of *anymore* on Twitter support that claim.

The Midland is not monolithic with regard to *anymore* productions, though. While previous research based primarily on grammaticality judgments has described positive-*anymore* as being acceptable across much of the Midland, this study shows compelling evidence that positive-*anymore* is used more in Pittsburgh than elsewhere in the Midland, and more in Columbus and Indianapolis than in Kansas City and St. Louis. Findings in this study put Pittsburgh at the heart of positive-*anymore* country, and the concentration of positive-*anymore* in discourse dissipates through the Midland to the west.

Indeed, Kansas City and St. Louis can only be regarded as marginally positive-*anymore* speech communities based on production data. Of the two, Kansas City has a slightly better claim to positive-*anymore* membership. If St. Louis's *anymore* indexes are removed from the Midland average plotted in Figure 5, then for all but five NPI triggers St. Louis's *anymore* indexes are closer to the non-Midland average than the Midland average. St. Louis still has a greater *anymore* index for fourteen of the nineteen NPI triggers than the non-Midland cities, though. So St. Louis is more of a positive-*anymore* speech community than the non-Midland cities are, but it is much less positive-*anymore* than the Midland cities to the east.

An anonymous reviewer rightly challenged that claims about St. Louis must be weighed against the limitation that I cannot control for race in this Twitter dataset. The 2010 Census reported that 18.6 percent of the total population of the St. Louis Metropolitan Statistical Area (MSA) identified as uniracially African American, compared with 15.0 percent in the Indianapolis MSA, 14.9 percent in Columbus, 12.5 percent in Kansas City, and 8.4 percent in

Pittsburgh (Wilson *et al*., 2012). Strelluf and Cardwell (forthcoming) report lower acceptability ratings for positive-*anymore* among African Americans in Kansas City. It may be, then, that positive-*anymore* is used less by African Americans, and the relatively lower proportions of positive-*anymore* productions in St. Louis may be a result of a greater portion of that city's tweets coming from African Americans.

St. Louis's tenuous participation in a regional grammatical feature also recalls the city's peripheral relationship to the Midland in terms of its phonology. Labov, Ash, and Boberg (2006) showed that St. Louis aligns with the Inland North "in its resistance to the low back merger" as well as "in several indices of the Northern Cities Shift" (276), but "in a number of other respects, St. Louis is more or less aligned with the Midland" (277). St. Louis's marginality with regard to regional phonetic and phonological characteristics in *ANAE* is paralleled by its marginality with regard to the grammatical innovation of positive-*anymore*.

More broadly, the identification of an east-to-west cline of positive-*anymore* speech communities within the US Midland is an important new contribution to knowledge about the feature. For instance, studies of positive-*anymore* grammaticality judgments—especially Youmans (1986) and Murray (1993), but also Ash (2006) and Labov, Ash, and Boberg (2006)—identified Missouri as a locus for positive-*anymore*. While it is clear from these studies that positive-*anymore* is part of the passive grammar of Missouri, production data indicate that positive-*anymore* is much less a part of the active grammar of Missouri than it is for parts of Indiana, Ohio, and Pennsylvania. This nuance in knowledge of positive-*anymore* highlights the dialectological value of finding innovative methods to study productions of linguistic variables that have traditionally resisted variationist study.

It also provides empirical evidence for positive-*anymore* becoming a feature of Midland grammar through an east-to-west diffusion. This would seem to coincide with the settlement- and migration-based accounts (e.g., Eitner 1949; Montgomery and Hall 2004). If a suitable diachronic corpus exists, this synchonic impression could be tested directly. Similar relative *anymore* indexes across the Midland (i.e., higher to the east and lower to the west) would support the hypothesis of a wave-like spread. Of course, the *anymore* indexes in this study would also provide a baseline for the incidence of positive-*anymore*, and the same diachronic study could compare *anymore* indexes at a different point in time to help determine whether positive-*anymore* is stable or changing as a productive grammatical variable. Given the increasingly massive corpora of historical texts that are being developed relatively routinely (e.g., Davies 2010-, 2011-), it seems likely that a corpus sufficient for such a diachronic study either exists or will exist soon. Otherwise, the present study may serve as a real-time baseline for a future study.

If such studies are possible, it will be very interesting to see whether the apparent distinctness of the Midland as a dialect region with regard to positive-*anymore* persists. A number of recent phonetic and phonological studies suggest that some of the regional dialect diversity marked out by *ANAE* may be leveling, especially as major patterns like the Northern Cities Shift and Southern Shift retreat in favor of more general patterns of low-back vowel merger and front short vowel retraction (see Strelluf 2018, Ch 9; Becker, in preparation). Productions of positive-*anymore* suggest that long-standing regional dialect divisions that have previously existed in lexis and phonology may still be maintained in low-frequency grammatical variables like positive-*anymore*. Such low-frequency features, could, in the changing landscape of American Englishes, take on new importance in mapping that landscape.

Anymore NPIs, Meanings, and Methods

This study approached positive-*anymore* from a variationist perspective informed by the semantics of NPIs, as well as a tradition of dialectological studies of positive-*anymore*. That interaction led to the development of a relatively complex coding scheme for NPI trigger. This further enabled the creation of an *anymore* index for comparing the proportions of productions of *anymore* in various NPI trigger environments and different speech communities. These coding and quantificational methods provide a useful framework for future studies on positive-*anymore* and, potentially, other linguistic variables like positive-*anymore* that have resisted variationist examination.

Differences between the *anymore* indexes of Midland and non-Midland cities, as well as among cities within the Midland, are especially important for comparative study. The averaged non-Midland *anymore* index in Appendix B might serve as a baseline for determining whether a speech community has an *anymore*-positive or -negative grammar.

Similarly, differences between the *anymore* indexes of particular NPI triggers may help inform the path *anymore* follows to lose its negative-polarity licensing requirement. The profile of Kansas City's *anymore* indexes relative to those of other communities, for instance, shows *anymore* being produced at relatively elevated levels in several NPI-licensing environments, but not in the straightforwardly positive-polarity environments of positive quantity, intensifer, and no trigger. Many of the occurrences of *anymore* with traditionally negative-licensing triggers, however, lend themselves easily to a grammatically positive interpretation:

(42) Adversative: @AggieFootball just really hard to watch *anymore* (Kansas City, Nov. 25)

(43) *only*/*just* ADV: I only write in cursive *anymore*. Writing in print is dreadfully slow (Kansas City, Dec. 1)

(44) *all*+NP: Seems like all I do *anymore* on my days off is clean (Kansas City, Dec. 08)

One possibility, then, is that a subset of NPI triggers that standardly license NPIs in all dialects operates to transition interpretations and uses of *anymore* from negative- to positive-polarity contexts. As *anymore* is produced more frequently with these NPI triggers, it might become polarity-ambiguous, facilitating a subsequent increase in polarity-positive usages. This subset would appear to include negative affect ADJ and V, *all*+NP, *only*/*just* ADV, negative quantity, and adversative.

On the other hand, increased production of *anymore* in positive-polarity contexts like positive quantity, intensifier, and no trigger may license positive-*anymore* to occur more in contexts that could standardly license negative-*anymore*. In this instance, the high occurrence of *anymore* in the eastern Midland cities in intensifier and no trigger would be dragging the occurrence of *anymore* with other NPI triggers upward in those cities.

Resolving these two possibilities is most likely the work of future diachronic study, though concentrated synchronic analysis of *anymore* in specific NPI trigger environments might also prove fruitful. Either way, it is worth calling to attention that “transition” suggests a semantic account of positive-*anymore* like the one offered by Hindle and Sag (1975), where

anymore always asserts ‘now’ but presupposes a contrast with the past, and dialects simply differ on the strength of the requirement for polarity licensing. This could be updated with Giannakidou’s (2011, 1687) description of “rescuing,” with the grammatical innovation being the extent to which dialects will add context to license an occurrence of *anymore* that is not overtly licensed. Alternately, Horn (2016) identified incorrect predictions about NPI-licensing made by rescuing operations, and instead suggested that NPI-licensing involves calculation of the “asserted/at issue component of meaning,” as well as “the speaker’s expectations about the hearer’s dynamically constructed discourse model.” Following Horn (2016), Hindle and Sag (1975) might be updated to suggest that positive-*anymore* emerges from scalar differences in speakers’ calculations of assertoric content required to license *anymore*. These explanations contrast with Labov’s (1973) claim that positive-*anymore* marks a distinct boundary in grammars, which Youmans (1986) also sided with.

Clearly, then, variationist and dialectological understandings of positive-*anymore* benefit from the semantic accounts of NPIs. At the same time, semantic accounts of NPIs may benefit from variationst and dialectological understandings of positive-*anymore*. In particular, I rehash the observation that, in published cases where language scholars have disagreed over the polarity of *anymore*, the NPI triggers that are present are the ones that trigger *anymore* more frequently in the Midland. Indeed, beyond NPI triggers like adversative and *only*/*just* ADV, this observation extends to WH-questions, which I treated above as anomalous. Youmans (1986, 61) reported that survey respondents were evenly divided with regard to the grammaticality of WH-questions. The Midland leads the non-Midland cities in *anymore* indexes for WH-question, and the Midland cities are also differentiated intra-regionally. WH-questions may, then, be another environment

where *anymore* is “more licensed” to occur in positive-*anymore* grammars than in negative ones. The intuitional disagreements among language experts and grammaticality survey respondents may indicate gradations in the licensing ability of specific NPI-licensors for *anymore*. Variationist studies of large production-based natural-language datasets may usefully reveal these gradations, and in doing so help advance semantic theory.

Appendixes

Appendix A. Counts of *anymore* by NPI trigger and city

Trigger	Non-Midland			Midland					Sum
	Birmingham	Chicago	San Francisco	Columbus	Indianapolis	Kansas City	Pittsburgh	St Louis	
overt NEG	4644	18822	14367	9734	7682	3456	10268	5749	**74722**
WH-question	84	330	272	164	174	76	217	89	**1406**
polar question	72	324	247	130	127	54	206	80	**1240**
if-conditional	1	19	23	22	10	6	12	3	**96**
NEG-affix ADJ	5	20	11	21	12	4	19	7	**99**
negative frequency	39	176	115	91	76	27	104	53	**681**
inherent negative	3	45	21	20	15	7	31	16	**158**
only/just ADV	1	11	6	26	21	9	43	7	**124**
negative quantity	18	76	55	65	69	16	90	25	**414**
comparative	1	11	0	14	14	3	17	9	**69**
too	3	28	30	25	14	6	23	10	**139**
all+NP	6	18	10	46	48	14	81	13	**236**
preposition	2	10	6	2	3	3	7	1	**34**
counterfactual	7	21	16	11	11	3	16	7	**92**
adversative	3	41	28	40	28	13	71	16	**240**
negative affect ADJ	1	9	1	22	13	5	38	3	**92**
negative affect V	0	3	2	20	6	5	40	4	**80**
positive quantity	1	2	5	36	18	11	42	2	**117**
intensifier	1	8	0	41	25	3	76	4	**158**
no trigger	4	13	7	31	27	5	70	10	**167**
Sum	**4896**	**19987**	**15222**	**10561**	**8393**	**3726**	**11471**	**6108**	**80364**

Appendix B. *Anymore* indexes by NPI trigger and city

Trigger	Non-Midland				Midland					
	Birmingham	Chicago	San Francisco	Mean	Columbus	Indianapolis	Kansas City	Pittsburgh	St Louis	Mean
WH-question	17.2	16.9	18.3	**17.5**	16.3	21.7	21.7	21.1	14.6	**19.1**
polar question	14.9	16.8	16.6	**16.1**	13.0	15.8	15.6	19.3	13.6	**15.4**
if-conditional	0.0	1.0	1.3	**0.7**	1.6	1.0	1.2	0.9	0.3	**1.0**
NEG-affix ADJ	0.6	0.9	0.7	**0.7**	2.1	1.4	0.9	1.6	1.2	**1.4**
negative frequency	7.8	8.4	7.4	**7.9**	8.0	8.9	6.4	8.7	8.9	**8.2**
inherent negative	0.6	2.2	1.1	**1.3**	2.1	2.0	2.0	2.8	2.6	**2.3**
only/just ADV	0.0	0.4	0.3	**0.2**	2.1	2.1	1.7	3.5	1.0	**2.1**
negative quantity	2.4	3.2	2.9	**2.8**	4.7	5.9	3.5	6.0	3.5	**4.7**
comparative	0.2	0.4	0.0	**0.2**	1.3	1.2	0.9	1.2	1.6	**1.2**
too	0.6	1.5	2.0	**1.4**	2.4	1.7	1.7	2.0	1.6	**1.9**
all+NP	0.4	0.5	0.2	**0.4**	2.1	2.3	1.7	3.6	1.0	**2.2**
preposition	0.2	0.4	0.3	**0.3**	0.2	0.4	0.9	0.7	0.2	**0.5**
counterfactual	1.3	1.1	0.9	**1.1**	1.1	1.0	0.3	1.2	1.0	**0.9**
adversative	0.6	1.9	1.8	**1.4**	3.7	3.4	3.8	6.4	2.4	**3.9**
negative affect ADJ	0.2	0.5	0.1	**0.3**	2.2	1.4	1.2	3.0	0.3	**1.6**
negative affect V	0.0	0.1	0.1	**0.1**	2.0	0.5	0.6	3.6	0.7	**1.5**
positive quantity	0.0	0.1	0.2	**0.1**	2.9	1.7	2.6	3.2	0.3	**2.1**
intensifier	0.2	0.4	0.0	**0.2**	4.0	2.6	0.9	7.3	0.7	**3.1**
no trigger	0.6	0.4	0.5	**0.5**	2.4	3.0	1.2	5.7	1.6	**2.8**

Appedix C. Counts of *anymore* by clausal position and city

Position	Non-Midland			Midland					Sum
	Birmingham	Chicago	San Francisco	Columbus	Indianapolis	Kansas City	Pittsburgh	St Louis	
initial	0	6	1	16	17	4	18	3	**65**
medial	29	86	68	96	98	30	147	28	**582**
final	4867	19895	15153	10449	8278	3692	11306	6077	**79717**
Sum	**4896**	**19987**	**15222**	**10561**	**8393**	**3726**	**11471**	**6108**	**80364**

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About

Christopher Strelluf is an assistant professor in the Centre for Applied Linguistics at the University of Warwick. He received his Ph.D. from the University of Missouri in 2014. His research interests include language variation and change, dialectology, and interactions between language and power. His monograph, *Speaking from the Heartland: The Midland Vowel System of Kansas City*, is available as the 103rd Publication of the American Dialect Society.