2022. *Proc Ling Soc Amer* 7(1). 5275. https://doi.org/10.3765/plsa.v7i1.5275.

Tree bahk or 3.0 Bark: Linguistic identity and the sociophonetic variation of rhotics in Gullah Geechee

John McCullough*

Abstract. The current study examines the speech of a Gullah Geechee personality who exhibits conscious shifts between sociolinguistic "styles" when speaking for an outsider audience. Her conscious use of this style shifting indexes specific identities, some for extracommunity consumption and some for demarcation of Gullah Geechee community membership. This ability to shift between lectal levels indicates a high degree of metadiscursive awareness, which is often not shared by the overt prestige status quo. This co-occurrence of style-shifting alongside both a creole continuum and cline of postvocalic r-lessness shows that singular features can co-index larger patterns of sociophonetic and discursive identity formation.

Keywords. sociolinguistics; sociophonetics; style-shifting; creole languages; Gullah Geechee

1. Gullah Geechee and intercommunity indexation. Rhoticity is a feature that is ubiquitously studied in English varieties, especially from a sociolinguistic (Labov 1972), and increasingly from a sociophonetic standpoint (Lawson, Scobbie, and Stuart-Smith 2011). The quality of *r-fulness* vs. *r-lessness*[1] is enregistered differently across dialects depending on other indexical features such as socioeconomic status (SES), ethnicity, and geography. It is often used to distinguish dialects in proximity to one another as an instant shibboleth of bricolaged features. The southeastern United States is no exception to this, being representative of several varieties with various levels of prestige and/or marginalization vis-à-vis the Mainstream American English (MAE)[2] status quo. These varieties include Southeastern American English (SAE) and its subvariety of the Charleston, S.C. dialect, and the ethnolinguistic repertoires[3] of African American English (AAE) and Gullah Geechee (also known variably as Gullah, Geechee[4], or Sea Island Creole), each with defined, but not mutually exclusive "marked" characteristics. These features

* The author would like to thank Tracey Weldon, Elaine Chun, Amanda Dalola, and Krystal Smalls for their support and feedback during the research and writing process. Additionally, I would like to thank Alada Shinault-Small for her tireless insight into the Gullah Geechee performance genre. Authors: John McCullough, University of South Carolina (mccullok@email.sc.edu).

[1] The terms r-ful and rhotic, and r-less and arhotic, are used throughout to indicate the same feature of variable rhoticity along a continuum (albeit to describe variation in different environments, under different circumstances), the metrics of which are dictated by the Bark scale, explained below.

[2] I.e., the variety of English spoken in the United States commonly perceived to be free of stigmatized features and considered to have high overt prestige in both formal and informal forms (Wolfram and Schilling 2016).

[3] Juxtaposed here with interrelated notions of style, lectal level, and register with regards to race and ethnicity (cf. ethnolect) as proposed below, defined as "a fluid set of linguistic resources that members of an ethnic group may use variably as they index their ethnic identities" (Benor 2010).

[4] While historically Gullah has been used as the preferred academic exonym, and Geechee the endonym (especially in Georgia), there is a current community shift to Gullah Geechee. Younger speakers and activists also actively distinguish between the terms Gullah and Geechee as representative of two separate, yet related varieties (Geechee Experience 2021).

have also played a central role in the designation of each of these varieties variously as accents, dialects, or languages—the labeling of which has had (de-)legitimating consequences as well as other effects on perceptions of the varieties by insiders and outsiders of the communities in which they are spoken and that they often represent. The media produced by public figures in the Gullah Geechee community form the foundation of this study, which seeks to answer the following questions:

- *Does r-lessness saliently distinguish Gullah Geechee from surrounding English varieties?*
- *How, when, and why is r-lessness utilized by speakers when performing style shifts with other varieties?*
- *What identities or roles are being indexed via r-lessness by Gullah Geechee speakers as distinct from outsiders, or the extracommunity?*

1.1. (SOCIO)PHONETIC IDENTITY ENREGISTERMENT. The current study lies within the domain of sociophonetics (Foulkes, Scobbie, and Watts 2010; Hay and Drager 2007) by examining the intersects of phonetic variation and indexical orders, and the effects of these intersections on social lives, language ideologies, and speech communities. Rhotic, i.e. r-ful, and r-less varietal distinctions have a longstanding history in the field of sociolinguistics (and more recently, sociophonetics) for typologically describing the distribution of intersections of class, geography, race and ethnicity in varieties of English. While phonological data for Gullah Geechee is available, fine-grained phonetic analysis does not exist at an equivalent level as AAE (Holt, Jacewicz, and Fox 2015; 2016). However, AAE phonetic analyses do provide models of phonetic variation that when combined with frameworks of audience design (Bell 1984), and attitudinal studies (Marlow and Giles 2008; Ohama et al. 2000) can create the opportunity for an analysis of Gullah Geechee sociophonetic variation and how/if features are perceived by non-members, or how speakers anticipate and navigate those perceptions.

1.2. INTERSECTION OF INTRA-, INTER-, AND EXTRA-COMMUNITY INDEXATION. Although r-lessness in this context is being illustrated as an identifying feature of the covert prestige varieties of the related ethnolinguistic repertoires of AAE and Gullah Geechee, it is important to juxtapose this with the co-existence of r-lessness as a salient historical feature of the largely overt prestige variety of the Charleston dialect, a subvariety of the larger Southern American English dialect chain (Baranowski 2006; 2013). The status of the Charleston dialect as significantly different from surrounding varieties, enough to be considered its own enclave compared to other dialect areas of the South (Labov, Ash, and Boberg 2006), indicates that the establishment of a particular community identity with tightly-connected stereotyped features, including r-lessness, has had an effect on other varieties in contact, not least AAE and Gullah Geechee (Wolfram and Thomas 2002).

This illustrates that r-lessness in isolation is not a unitary marker of class, prestige, or ethnolect; rather it relies on the context of the speaker, listener and performance, as well as a constellation of other linguistic tokens to produce a specific identity. This also de-links ideologies of direct association between r-lessness and stigmatization by non-MAE speakers in the Charleston area; the feature of r-lessness can mutably index both covert and overt prestige varieties, and by extension robust indexical fields. However, it should be noted that perceptions of the speaker's race by the (white) listening subject can directly influence how the feature is taken up and indexed along lines of prestige, class, and education within the raciolinguistic framework (Rosa

and Flores 2017); this includes exoticized or hyperbolized confabulations of language practices by the overt prestige status quo onto marginalized groups that erase heterogeneous realities for monoliths of language and race as tactics of hegemonic and chronotopic control (Inoue 2004).

The variable nature of creole languages, while allowing for speakers to utilize specific linguistic repertoires to produce certain identities, also intersects with the ideological notion of "sounding X", where 'X' is a race or ethnic identity. As a historically stigmatized creole language with a nonstandard phonetic orthography, Gullah Geechee represents a potentially more localized or distinct set of ideological assumptions towards speakers and the speech community (based on geography and community population size), where 'sounding Geechee' can take an additional bundle of evaluative indices. The notion of 'sounding Black' represents a myriad of associated indices based on listener identity and stance; attitudinal studies additionally reveal Gullah Geechee voices include similarly complex perceptions surrounding ruralness, class, and informality, as well as consistently indexing a strong Black identity, especially when compared to "proper" Black voices by both African American and white listening subjects (Weldon 2021).

Although the Charleston dialect is historically associated with the upper-class white communities of the area, the sharing of r-lessness with covert prestige ethnolects produces a sociophonetic feature highly salient in conscious stylization and performance. This is clearly seen in the construction of identity and community membership, especially because of the relatively recent rapid transition of many southern varieties into r-ful ones (Wolfram and Thomas 2002) and the resulting use of r-lessness in stylized performances by speakers to distinguish themselves from rhotic speakers, identities, and inherent intercommunity ideologies (Schilling-Estes 1998).

1.2. STYLE AND STYLIZATION OF CREOLE LANGUAGES. The notion of style, conceptualized as "situationally dependent intraspeaker variation" (Roberts 2004) is a critical component that ties together much of the above ideologies of indexicality, identity, enregisterment, and the linguistic embodiment of self and community. Style as connective tissue between the individual and their identity, and how that identity is negotiated with communities, has only relatively recently become foregrounded in creole language studies to juxtapose more traditional research on interspeaker variation along the post-creole continuum (Bickerton 1975; Rickford 1987). The highlighting of the importance of style is unsurprising as research concerning creole languages in post-colonial environments turns to sites of cultural preservation and stabilization, especially in contexts of language commodification where style shifts are used to navigate the symbolic marketplace of intercommunity interactions.

It is important to note here as well the role that style and stylization play in the continuous cycles of expectation and evaluation by communities. Stylization only "works" when it invokes existent indices of the variety that have been taken up by the speaker, which are indexically imposed by the linguistic expression of that speech community as consciously recognizable Labovian *markers* or *stereotypes* (Eckert 2008; Labov 1971) and are often qualified against a metric of perceived authenticity (the "real"), both by other intracommunity speakers as well as the expectations of extracommunity members. In the case of Gullah Geechee, this basilectal stylization in commodified contexts (i.e., *curated* Gullah Geechee), while potentially running the risk of shifting extracommunity expectations in such a way that the stereotyping overtakes the realities of everyday Gullah Geechee speech, also galvanizes the variety as indexing a specific community apart from non-members, providing agency to speakers and resisting dominant language ideologies. For the purposes of the current study, this also centers stylized speech as a dependent variable through which relative r-lessness can be measured along a rhotic continuum.

Stylization via language style is always occurring to some degree, whether at the conscious or unconscious level, or somewhat on both simultaneously; however, the operationalizing of this research delineates between terming especially marked, self-conscious or basilectal speech for a particular discursive purpose as *stylized*, and the framing, unmarked, more acrolectal voice as *non-stylized*. Within these two levels of stylization, an underlying unconscious register exists, including possible arhotic variation, but the focus is on discursive moments of performance where conscious style-shifting can be perceived. Along a similar line of conceptualization, language and identity are always being performed, whether constructed, negotiated, reinforced, or contested. However, performance for the purposes of this research is identified as both the genre of curated expression by the speaker, as well as the multiple voices (Bakhtin 1986) undertaken by the speaker to both index specific identities as well as establish her authenticity and authority in the performance of those identities.

1.3. DOMAINS OF STYLIZED SPEECH. Because this study emphasizes the distinction between conscious (non-)stylization of a creole variety, it is important to delineate the specific domains of discourse in which the occurrence of stylization is most salient. The identification of these domains is by no means the only discrete boundaries of where the stylization occurs, rather representing common themes in which basilectal features were consistently used. These domains are reported and quotative speech, language-sharing, and epistemic turns and enregistered stance-making. Each of these domains can also be characterized as not only being representative of basilectal stylization, but also as opportunities for the speaker to illustrate her metalinguistic and metadiscursive awareness in understanding the expectations of her performance and her linguistic choices to reinforce or disrupt those expectations.

2. Methods. This research examines a Gullah Geechee "spokeswoman" and storyteller: Carolyn "Jabulile" White (White 2010). She is a Gullah Geechee speaker native to the traditional indigenous region of the Gullah Geechee speech community, specifically James Island. She has a robust multimodal "footprint" as a local activist, including multiple video interviews, educational programs, and storytelling, i.e., genres of discourse in which she performs distinct style shifts (both between videos and within the videos themselves), although purpose and expected audiences vary. Although not explicitly stated as the intended audience for the performances, this genre in this context is overwhelmingly associated with extracommunity audience design and consumption. The performances are situated at multiple levels of referee design, ranging from intimate, local, face-to-face populations to outsider populations further afield using audiovisual media. These imagined audiences affect the linguistic features used during a particular performance, with shifts into a basilectal style to reinforce features that are more subtle in day-to-day, uncurated Gullah Geechee. Carolyn White embodies a role as "storyteller"; most of her media is aimed at entertainment that also educates (similar to other well-known local educators such as Anita Singleton-Prather (The Gullah Kinfolk Traveling Theater 2019), also known as "Aunt Pearlie Sue"). This is in contrast to the more politicized overt activism of figures such as Queen Quet (Queen Quet 2012).

2.1 STIMULI AND TEXT. The source chosen is a video interview (Wikitongues 2013) with Carolyn White in which she gives an overview of the history of Gullah Geechee, as well as her relationship and personal history with the area and her culture, with Wikitongues (Wikitongues 2011), a non-profit language documentation organization. The interview exhibits White speaking to an

unseen interviewer, mostly as a conversational monologue, with very little interspeaker participation. However, the interviewer (white, male, MAE speaker) and audience design are reflective of the larger expectations of the intended audience: A showcase of a Gullah Geechee woman, discussing her history and culture, with linguistic examples to establish her linguistic authenticity and authority.

It is unsurprising to find that there is a certain amount of audience accommodation present (cf. Rickford & McNair-Knox, 1994); as Wikitongues is a language documentation organization, there is an implicit expectation for White to use examples of basilectal Gullah, in order to provide a stance of authentic linguistic and cultural intercommunity liaison. The topics provided during her interview also align with the expectations of the minoritized storyteller: childhood and "fish-out-of-water" anecdotes, language-showcasing and sharing, and references to locality, family, cuisine, and sharing of tradition, superstition, and religious cultural concepts. White exhibits a high degree of code-switching and style/register shifting for both conscious efforts of performance and entertainment and unconscious maintenance of her idiolect (Stanback 1984); the video displays marked intraspeaker variation, which makes it a salient site from which to observe style shifts and rhoticity across a variety of topics and discursive turns.

2.2. MEASUREMENTS**.** Praat (Boersma and Weenink 2021) was used to compare the phonetic variables between the style shifts of the Gullah Geechee speaker Carolyn White. The presence of postvocalic /r/ as part of a consonant cluster was also recognized as a separate phenomenon and therefore separate variable with its own potential value as sociophonetic variation. While it often co-occurs with arhoticity effects in the data it should not be totally conflated as the same indexical postvocalic environment because of the effect on the additional consonant on rhoticity. Its co-occurring effects will be shown with the corresponding non-clustered (a)rhotic token results.

The "strength" of the rhotic was measured at the centerpoint of the realization in cases where it appeared orthographically and phonetically (it is often the case that standard English orthography represents the [r] unrealized in r-less varieties, and Gullah Geechee orthography lacks [r] in contexts where it may actually be represented at a reduced strength if not completely r-less); however, because Gullah Geechee and AAE both have "marked" degrees of arhoticity, in those cases it was measured where the vowel had undergone compensatory lengthening[5] and where there was an /r/ underlyingly in the English superstrate. The force of the rhoticity was measured in F3-F2 difference, converted to Bark[6] (Bk) as per Thomas 2010. Thomas gives a benchmark of 3.0 Bark for auditory rhoticity in English as a differential arising from subtracting Bark-transformed F2 from Bark-transformed F3, which gives a consistent metric to measure intraspeaker variation during stylistic and lectal shifts. The r-ful realizations of word-initial and other prevocalic [r] tokens in the data reflect the utility of this benchmark, with these environments consistently measuring close to the 3.0 rhotic baseline. Further absolute differences between the Bark transformation and the benchmark indicate decreasing audible rhoticity to r-lessness. By using Bark normalization, visualization (via NORM[7]) is also be applied to illustrate differences between White's second and third formants. This produces not only a numeric generalization of her distributions, but also a graphical overlay of the "distance" of her rhoticity during stylized and non-stylized speech and can map interlectal shift differences. This normalization

[5] This lengthening was determined by comparing vowel lengths across segmental contexts and also supplemented by orthographic conventions for tokens.
[6] Zi = 26.81/(1+1960/Fi) - 0.53 (Traunmüller 1997).
[7] (Thomas & Kendall, 2007).

also allows for comparative mapping of White's speech in regards to other variables, such as rhoticity of repeated terms (for either contrast, emphasis, or language-sharing), lexicalized terms, and quotative speech.

For the purpose of this study, classifications of [r] were consolidated into categorical scales of rhoticity by measuring the difference of the absolute value of the Bark result with the benchmark (i.e., measuring the distance between result and benchmark), as shown in Table 1:

Rhoticity value (rv)	Rhoticity designation
0.0-0.15	most rhotic; r-ful
0.16-0.25	very rhotic
0.26-0.40	moderately rhotic
0.41-0.60	less rhotic
0.61-0.99	mostly arhotic
1.00+	least rhotic; arhotic

Table 1. Qualitative rhotic 'value' designation

Although rhoticity happens along a continuum rather than as discrete units of r-ful or r-lessness, these categorizations are helpful in determining the relative groupings of words and word instances that pattern with relative strengths of the rhotic, given a 'rhoticity value (rv)' (i.e., the difference of realized absolute bark and the 3.0 Bark benchmark) and rhoticity designation. The categories were impressionistically established where there were general thresholds of marked (a)rhoticity as well as auditory shifts at perceptual boundaries between rhotic strengths.

3. RESULTS. Comparison of Bark values shows a marked intraspeaker variation when performing shifts between acrolectal and basilectal expressions for the speaker, dependent on stylistic and the discursive domain factors discussed above. The following variables were examined for their effect on rhoticity based on *non-stylized* and *stylized* speech: word position (*medial,* or *final*), intrasyllable position (*onset* or *coda*), syllable location (*antepenultimate, penultimate, ultimate* or *monosyllable*), vocalic environment (*intervocalic* or *postvocalic*). A secondary variable was measured concerning whether the token was "isolated" or part of a consonant cluster (± *cluster*), and the effect of clustering on rhoticity as a separate sociophonetic feature. Each variable exhibited effects on rhoticity in specific environments, especially in conjunction with other phonetic and segmental features. The combination of stylization and linguistic environment are important co-occurring independent variables, as 'performance speech' can often be typified as displaying more regular patterning in specific segmental and discursive contexts (Schilling-Estes 1998). The performance highlights salient features through style-shifting, in this case a similar phonetic phenomenon that can be roughly delineated by (un-) performance or types of awareness, marked or stereotyped by r-lessness.

Table 2 illustrates average Bark and by extension rhoticity of the tokens for each word position, intrasyllable position, syllable location and surrounding environment, in each style. The 'stylization' sections indicate the stylization of speech (*stylized* or *non-stylized*). The following rows indicate word position and clusters (*initial, initial cluster, final cluster, final*) of the underlying rhotic (whether expressed at the basilectal level or not). The *medial* column is further specified by intrasyllable position, due to each intrasyllable type (*coda* and *onset*) being found in word-medial environments. The 'Average Bark' column indicates the average of the modified Bark measurement as the difference of Bark between formants as the general rhoticity, with decreasing rhoticity with difference from the 3.0 benchmark. The 'Average rhoticity' (rv) is a mod-

ification of the previous column, indicating the difference between the benchmark 3.0 Bark and the average rhoticity of the environment, i.e., the previously established average rhoticity (rv). The lower the figure in this column, the higher the rhoticity of the word position (e.g., a 'rhoticity value' from 0.0-0.15 being 'most rhotic; r-ful'). The final column 'Context' provides an example token for each type drawn from the dataset. Table 2b illustrates similar data with a different visualization, namely the relationship between syllable location and intrasyllable position. This highlights the manner in which syllable structure exhibits significant effects on rhoticity when considered alongside word position.

a. word position	**Average Bark**	**Average rhoticity (rv)**	**Context**
non-stylized:	3.55	0.75	
medial:	3.40	0.52	
syllable-onset	3.06	0.20	*a.**r**ound*
onset cluster	3.45	0.62	*a.**cr**oss*
coda cluster	4.57	1.57	*gi/**r/l.**friend*
coda	4.02	1.09	*un.de**r.**stand*
final cluster	3.79	0.93	*an.ce.sto**rs***
final	3.89	1.30	*cul.tu**re***
stylized:	3.77	1.03	
medial:	3.65	0.92	
syllable-onset	3.01	0.42	*ok.**r**a*
onset cluster	4.30	1.44	*chil.**dr**en*
coda cluster	5.29	2.29	*cha**rl**e.ston*
coda	4.19	1.27	*sa**r.**dines*
final cluster	3.59	0.99	*lea**rn***
final	4.17	1.43	*bet.te**r***

b.	**intrasyllable position**			
syllable location	*onset*	*onset cluster*	*coda cluster*	*coda*
non-stylized	***3.05***	***3.29***	***3.87***	***3.91***
antepenultimate	3.06	3.04	N/A	3.75
penultimate	3.07	3.24	4.57	4.00
ultimate	3.06	3.44	4.39	4.12
monosyllable	2.99	3.31	3.20	3.75
stylized	***3.07***	***3.34***	***3.72***	***4.17***
antepenultimate	2.98	N/A	N/A	N/A
penultimate	3.20	2.98	5.29	4.19
ultimate	2.98	4.64	4.65	4.54
monosyllable	3.19	3.08	3.38	3.94
intrasyllable avg	**3.06**	**3.31**	**3.81**	**4.02**

Table 2a & b. [r] tokens across speech style, word and intrasyllable position

The above tables show that as expected, there is a significant variation between the Bark measurements: between speech style and realization of word position, intrasyllable position, and syllable location in each style. There are several conclusions we can draw from this initial look at the data. Firstly, the hypothesis of stylized speech being markedly less rhotic than non-stylized speech is supported by these data. Although there are a few contexts where stylized speech measured on average slightly more rhotic than non-stylized utterances (i.e. *word-medial syllable-onset* environments, and *word-final clusters*)[8], for the most part we can observe that stylized speech in the same environments has a higher Bark and therefore lower rhoticity, with an average deviation from the benchmark of 1.03rv for stylized speech and 0.75rv for non-stylized speech.

Secondly, we can also reasonably assume that the use of the 3.0 benchmark as our baseline of rhoticity from which we can measure deviations based on other variables is supported by the data. The [r] tokens in word-initial and/or prevocalic positions are most isolated and least influenced by other segmental considerations and are therefore excluded as variables and sites of intraspeaker rhotic variation. This is supported by the average measurements: rhoticity is highest in syllable-onset positions regardless of stylization (3.05-3.07 Bk). The second table highlights this characteristic of syllable onsets even more clearly—regardless of stylization or syllable location, onsets have consistently r-ful expressions (average 3.06 Bk). It is important to distinguish word-initial [r] (non-variable) tokens and non-initial syllable-onset (variable) [r] tokens: medial syllable-onset tokens exhibit markedly less rhoticity when they are part of a consonant cluster (cf. the non-effect of a following consonant in word-initial environments). Being part of an onset cluster unsurprisingly lowers rhoticity; however, this effect is mitigated in non-stylized speech compared to stylized speech. In fact, in stylized speech, onset clusters in ultimate syllables (e.g., *chil-lun* or 'children') averaged much higher arhoticity (4.64 Bk[9]). Therefore, although prevocalic [r] is not an environment for indexical rhotic variation in word-initial position, it can be argued that it is variable in syllable-onset position. However, this context illustrates arhoticity rather than postvocalic r-lessness, which may indicate an operating below the level of conscious awareness or control.

Thirdly, it can also be observed in both tables as a *general* rule of this variable arhotic speech that [r] is derhoticized towards the end of the word and towards the end of the syllable. However, this general loss of rhoticity, also visualized as a rising of Bark and deviation from our benchmark, is punctuated by another "peak" of Bark rise and general r-lessness at the position of *word-medial coda cluster* (e.g., *Cha**rl**eston*). This is true of both stylized and non-stylized speech, with the "peak" being more dramatic in stylized speech with a 2.29rv deviation, as seen in Figure 1.

Another distinction that the use of the Bark metric provides is the correlation of vocalic environment with the benchmark. We know that postvocalic positions are where studies ubiquitously depict r-lessness as most salient; the current research reflects this, as well as exhibiting a larger deviation from the benchmark in stylized speech compared to non-stylized speech, as seen in Figure 2.

[8] Also *word-initial clusters*, but as they are not sites of rhotic variation, they are excluded from the analysis.
[9] Cf., 3.44 Bark for the non-stylized counterpart.

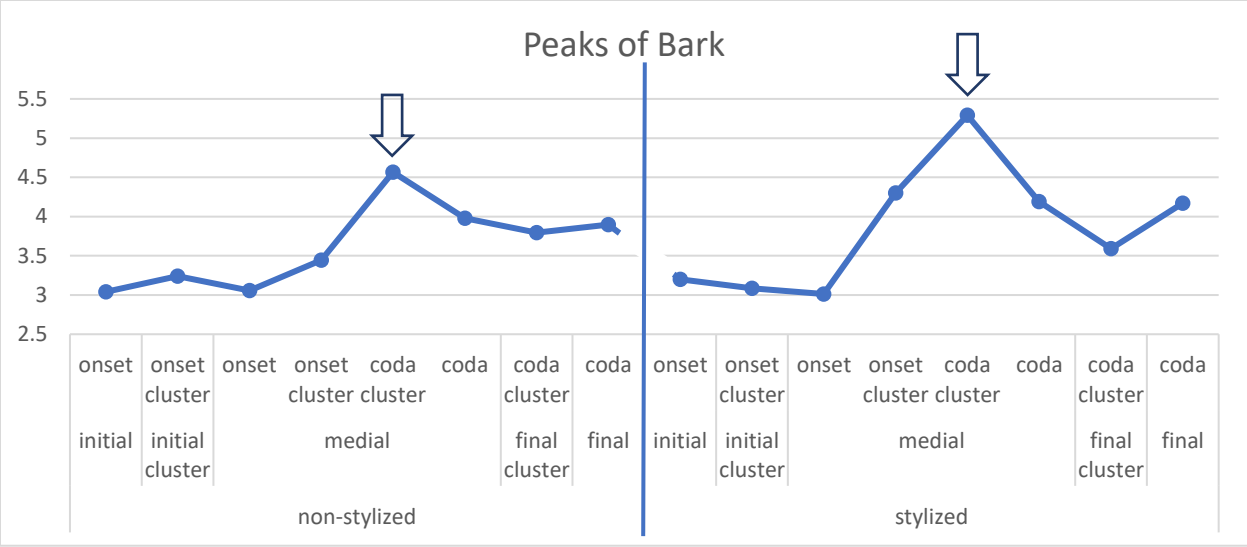

Figure 1. "Peaks" of Bark in *word-medial coda cluster* environments

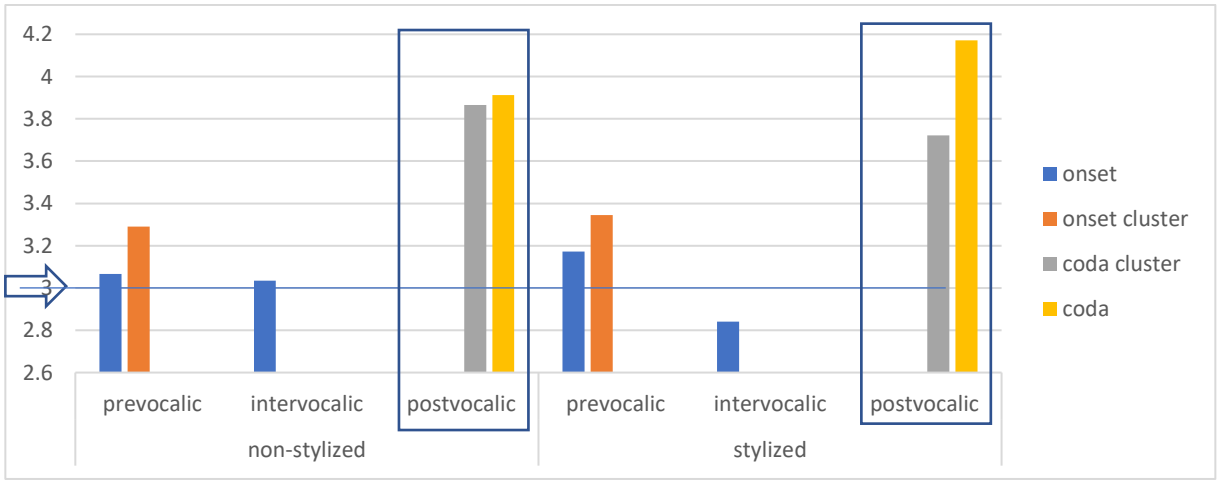

Figure 2. [r]-value by vocalic environment and syllable position

The above distribution of Bark by relative vowel position illustrates the distribution of average Bark by style and syllabic environment. Using the benchmark 3.0, the bars closer to 3.0 represent more rhoticity, in this case best typified by *prevocalic* (3.06 Bk) and *intervocalic syllable-onset* (3.03 Bk) environments of *non-stylized* speech. Note that the near-baseline consistency between stylized and non-stylized versions of these vocalic environments indicate that they lack the variation to be significant sites of stereotyping, while other environments with further deviations from 3.0 (higher or lower) represents less r-ful realizations and therefore sites of intraspeaker variation. Expectedly, postvocalic [r] is the environment with the highest deviation from the benchmark. Along with this, the general theory of stylized speech exhibiting less rhoticity also applies. However, an interesting effect regarding [r] as part of a cluster in stylized speech can also be observed: in prevocalic environments, being part of an onset cluster reduces rhoticity,

and in postvocalic environments the opposite occurs and being part of a coda cluster *increases* rhoticity[10]. This reflects that underlying rhotics at either word boundary are markedly affected by the secondary variable of clustering or if "isolated" from another consonant; it also speaks to the two separate motivations or realizations of arhoticity occurring—the prevocalic cluster variation and the postvocalic cluster marker or stereotype. Although clustering affects rhoticity, it affects these types of arhoticity and r-lessness differently, illustrating its influence as a secondary variable.

Figures 3 & 4 visualize the distribution of the Bark of Carolyn White by style and [r]-position using NORM normalization to map the token measurements. Each variable used to illustrate the relationship between segmental or sociophonetic variation and rhoticity was mapped, with the most significant results being depicted below. Figure 3 shows a representation of all tokens in order to map a total visualization of style and r-position relative to intrasyllable position and measured by Bark.

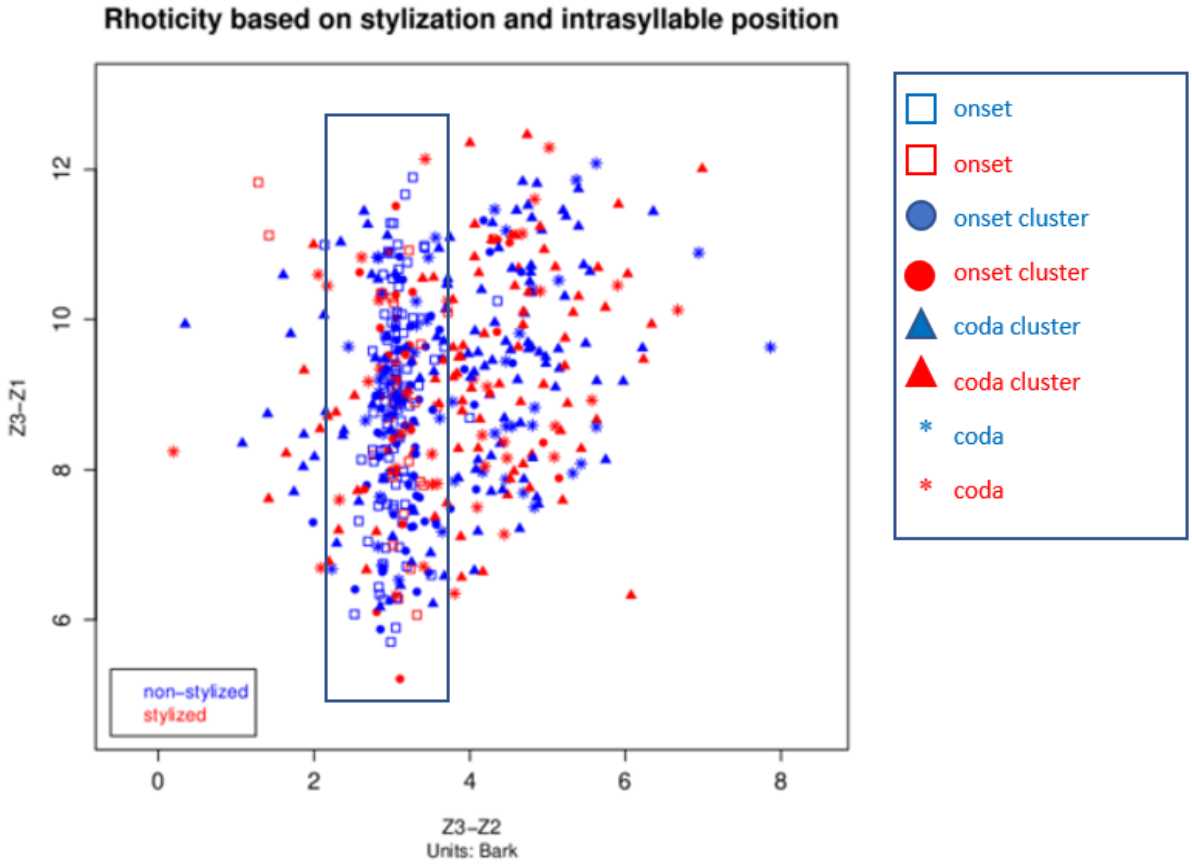

Figure 3. Rhoticity of all tokens by style and syllable position

[10] To a much more dramatic degree than in non-stylized speech, where coda cluster and coda Bark is 3.87 and 3.91 respectively (cf. stylized coda cluster and coda Bark of 3.72 and 4.17).

As seen above, the clustering of much of the tokens occurs at 3.0 Bark (represented by these visualizations as the difference F_3-F_2 converted to Z3-Z2 along the x-axis), confirming the previous benchmark given by Thomas 2010. It can also be seen that many of the tokens outside of the benchmark range are coda cluster (triangle) or coda [r] (asterisk), especially in the case of stylized (red) tokens. Figure 4 below gives a clearer indication of where each style maps for the speaker as an average of all [r] tokens by their intrasyllable variation.

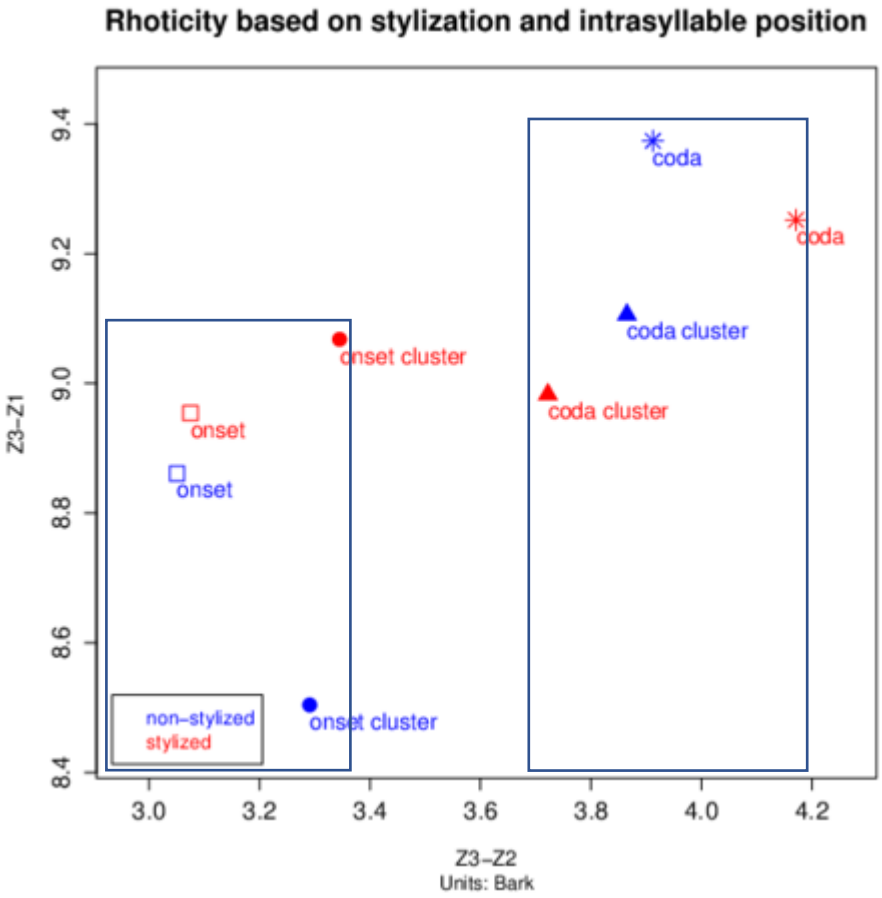

Figure 4. Rhoticity style and syllable position by average Bark

The clustering around 3.0 Bark is still present, unsurprisingly most closely for syllable-onset [r]. Again we see that [r] derhoticizes towards the end of syllables (and words), with syllable-coda tokens having a much higher Bark than the other positions. Stylized tokens overall have a higher Bark and therefore lower rhoticity than their non-stylized counterparts; however, an exception to this is coda-cluster [r] to which a theorized interpretation is provided in the discussion below.

4. Discussion. Although the entire distinctive phonemic inventory of Gullah Geechee was not within the scope of this study, the observed results distinguish a marked difference in rhoticity. This feature of rhoticity is enregistered to the point of being consciously used by the speaker

when performing stylistic shifts between acrolect and basilect. Taking into account intraspeaker variation[11], there is a distinction between rhoticity used for stylized and non-stylized register shifts.

This feature and its shifting are prevalent between speaker styles, although the force of arhoticity differs based on context. Rhoticity as an unmarked feature is maintained most at *syllable-onset*; underlying rhotics are on average most likely to be absent from more marked Gullah Geechee expression in *penultimate postvocalic syllable-coda clusters* (e.g., 'gi***rl***friend) and *penultimate postvocalic syllable codas*. However, the inverse is not necessarily true: while word-final clusters and word-final tokens have a relatively high Bark and r-lessness, they are less intense than the average arhoticity of word-medial coda clusters. Regardless of syllable location, onsets are salient areas of rhoticity, and in general rhoticity decreases from onset to coda location. However, this distinction of (a)rhoticty is not a strict binary—the above figures depict average token Bark values while recognizing individual tokens may be located in larger distributional fields based on other contextual factors of sociophonetic expression. Because the speaker also utilizes non-Gullah Geechee "voices", this relative r-lessness can also influence their use of rhoticity in casual speech at the mesolectal or acrolectal level as well, signaling that both conscious and unconscious variation are at work here.

4.1. FUTURE DIRECTIONS AND CONSIDERATIONS. Another future consideration is the relationship between creole languages and lexicalization of items that were previously phonetically variable in nature depending on speaker position along the creole continuum, style or register-shifting. Several of the tokens can sufficiently be realized as lexicalized and "entrenched" in their phonetic realization, and while they act as more salient indices or shibboleths of community membership, it does affect how intracommunity and extracommunity members perceive these terms. These lexicalized terms should be recognized as a separate variable at the lexical or morphosyntactic level rather than the phonetic. Some lexicalized terms used by White include *gyal* 'girl', *gwine* 'go on', *umman* 'woman', *hunnachillun* 'children', *fuh* 'for', *Aish* 'Irish', *mo* 'more', and *dey* 'there'. More research needs to be done on if these words exist as variable in the minds of ingroup speakers, and if not, if (or to what extent) they have a diffusive effect on the surrounding utterance. This is especially important for syntactic components like the complementizer *fuh* and morphologically distinct words such as *dey* that also exist as part of lexicalized or semi-lexicalized compounds (e.g., *shamdey* 'see there', *yamdey* 'see them there').

5. Conclusion. Gullah Geechee as a marginalized language variety exists in an odd schismatic position in modern southern socioculture, in that it is both appreciated as a linguistic and cultural artifact while continually marginalized by hegemonic language practices. Public figures representing the Gullah Geechee community act as intercommunity liaisons, using language along a lectal continuum in order to index heterogeneous identities despite extracommunity monolithizing pressures. This conscious use of style shifting in curated contexts of performance allows for the complex construction of identities, highlighting demarcations between in-group and outgroup and various speaker roles. However, this could also signal the existence of a type of linguistic feedback loop of higher-level indexicalities, where the extracommunity perpetuates its own expectations of the Gullah Geechee community based on previously circulating language ideologies that will need to be disrupted or contested by instantiations of intracommunity input,

[11] Including measurements of repeated tokens (e.g., 'for' [n=24]) to establish not only if similar Bark values were obtained, but also if repeated tokens diverged significantly in the cases of stylized versus non-stylized speech.

agency, and representation. The increased frequency and appearance of Gullah Geechee media and language exposure creates more occasions for salient identity construction of the speech community and producing opportunities of agency, prestige sociolinguistic control for speakers.

The study found that rhoticity is a highly active feature in stylization of Gullah Geechee, including when a speaker wishes to distinguish themselves from nearby varieties of English[12] and even from other registers in their own idiolect. The participant's production of multiple "voices" through shifts along creole and stylistic continua reflect metapragmatic awareness expected of an intracommunity member of a marginalized variety. As hypothesized, [r] generally derhoticizes further towards the ends of word position and syllable position, with penultimate postvocalic syllable-coda cluster environments consistently displaying the highest the most r-lessness (4.57 & 5.29Bk), regardless of stylization. The speaker uses a variety of phonetic, syntactic, and lexical Gullah Geechee features to emphasize intracommunity alignment and contrast with non-Gullah Geechee language practices. The speaker also created salient "moments" of curated Gullah Geechee discourse during the performance of language, especially with discursive domains of quotative and reported speech, language-sharing tactics, and enregistered stance-making. This not only establishes the speaker as an authentic and authoritative intercommunity liaison, but also shapes the perceptions of the out-group listening subject and illustrates the participant's utilization of stylization and conscious lectal shifting to embody distinct personae and ideologies of covert and overt prestige in her language use.

References

Bakhtin, Mikhail M. 1986. *Speech genres and other late essays*. Austin, TX: University of Texas Press.

Baranowski, Maciej Andrzej. 2006. *Phonological variation and change in the dialect of Charleston, SC*. Philadelphia: University of Pennsylvania dissertation.

Baranowski, Maciej Andrzej. 2013. Ethnicity and sound change: African American English in Charleston, SC. *University of Pennsylvania Working Papers in Linguistics* 19(2). 1–10.

Bell, Allan. 1984. Language style as audience design. *Language in Society* 13(2). 145–204. https://doi.org/10.1017/S00474045000103.

Benor, Sarah Bunin. 2010. Ethnolinguistic repertoire: Shifting the analytic focus in language and ethnicity. *Journal of Sociolinguistics* 14(2). 159–83. https://doi.org/10.1111/j.1467-9841.2010.00440.x.

Bickerton, Derek. 1975. *Dynamics of a creole system*. Cambridge: Cambridge University Press.

Boersma, Paul & David Weenink. 2021. Praat: Doing phonetics by computer. Computer program. https://www.fon.hum.uva.nl/praat/.

Eckert, Penelope. 2008. Variation and the indexical field. *Journal of Sociolinguistics* 12(4). 453–476. https://doi.org/10.1111/j.1467-9841.2008.00374.x.

Foulkes, Paul, James M. Scobbie & Dominic Watts. 2010. Sociophonetics. In William J. Hardcastle, John Laver & Fiona E. Gibbon(eds.), *Handbook of phonetic sciences(*2nd edition). Wiley Online. https://doi.org/10.1002/9781444317251.ch19.

Geechee Experience. 2021. Geechee Experience. Web page. https://geecheeexperience.com/. Hay, Jennifer, and Katie Drager. 2007. Sociophonetics. *Annual Review of Anthropology* 36(1). 89–103. https://doi.org/10.1146/annurev.anthro.34.081804.120633.

Holt, Yolanda Feimster, Ewa Jacewicz & Robert A Fox. 2016. Temporal variation in African

[12] E.g., the impressionistically white MAE of the interviewer.

American English: The distinctive use of vowel duration. *Journal of Phonetics & Audiology* 2(2). 460–470. https://doi.org/10.4172/2471-9455.1000121.
Holt, Yolanda Feimster, Ewa Jacewicz & Robert Allen Fox. 2015. Variation in vowel duration among Southern African American English speakers. *American Journal of Speech-Language Pathology* 24(3). 460–69. https://doi.org/10.1044/2015_AJSLP-14-0186.
Inoue, Miyako. 2004. What does language remember?: Indexical inversion and the naturalized history of Japanese women. *Journal of Linguistic Anthropology* 14(1). 39–56. https://doi.org/10.1525/jlin.2004.14.1.39.
Labov, William. 1971. The study of language in its social context. In Joshua A. Fishman(ed.), *Volume 1 basic concepts, theories and problems: Alternative approaches*, 152–216. Berlin: De Gruyter Mouton. https://doi.org/10.1515/9783111417509-004.
Labov, William. 1972. The social stratification of(r) in New York City department stores. In Willam Labov(ed.), *Sociolinguistic patterns*, 43–69. Philadelphia: University of Pennsylvania Press.
Labov, William, Sharon Ash & Charles Boberg. 2006. *The atlas of North American English: Phonetics, phonology, and sound change: A multimedia reference tool*. Berlin: Mouton de Gruyter.
Lawson, Eleanor, James M. Scobbie & Jane Stuart-Smith. 2011. The social stratification of tongue shape for postvocalic /r/ in Scottish English. *Journal of Sociolinguistics* 15(2). 256–68.
Marlow, Mikaela L, and Howard Giles. 2008. Who you tink you, talkin propah? Hawaiian Pidgin demarginalised. *Journal of Multicultural Discourses* 3(1). 53–68.
Ohama, Mary Lynn Fiore, Carolyn C. Gotay, Ian S. Pagano, Larry Boles & Dorothy D. Craven. 2000. Evaluations of Hawaii Creole English and Standard English. *Journal of Language and Social Psychology* 19(3). 357–77. https://doi.org/10.1177/0261927X00019003005.
Queen Quet. 2012. Gullah/Geechee Nation. Web page. https://gullahgeecheenation.com.
Rickford, John R. 1987. *Dimensions of a creole continuum: History, texts & linguistic Analysis of Guyanese Creole*. Stanford, CA: Stanford University Press.
Rickford, John R. & Faye McNair-Knox. 1994. Addressee- and topic-influenced style shift: A quantitative sociolinguistic study. In Douglas Biber & Edward Finegan (eds.), *Sociolinguistic perspectives on register*, 235–276. Oxford: Oxford University Press.
Roberts, Sarah J. 2004. The role of style and identity in the development of Hawaiian Creole. In Geneviève Escure & Armin Schwegler (eds.), *Creole language library*, 331–350. Amsterdam: John Benjamins. https://doi.org/10.1075/cll.27.16rob.
Rosa, Jonathan Daniel & Nelson Flores. 2017. Unsettling race and language: Toward a raciolinguistic perspective. *Language in Society* 46(5). 621–47. https://doi.org/10.1017/S0047404517000562.
Schilling-Estes, Natalie. 1998. Investigating 'self-conscious' speech: The performance register in Ocracoke English. *Language in Society* 27(1). 53–83.
Stanback, Marsha Houston. 1984. *Code-switching in Black women's speech.* Amherst, MA: University of Massachusetts dissertation.
The Gullah Kinfolk Traveling Theater. 2019. Aunt Pearlie Sue. https://www.gullahkinfolktravelingtheater.org/aunt-pearlie-sue.
Thomas, Erik R. 2010. *Sociophonetics: An introduction*. New York: Palgrave MacMillan.
Thomas, Erik R. & Tyler Kendall. 2007. NORM: The vowel normalization and plotting Suite. Online resource. http://lingtools.uoregon.edu/norm/index.php.

Traunmüller, Hartmut. 1997. Auditory scales of frequency representation. Online resource. https://www2.ling.su.se/staff/hartmut/bark.htm .
Weldon, Tracey L. 2021. Sounding Black. In Tracey L. Weldon (ed.), *Middle-class African American English*, 179–210. Cambridge: Cambridge University Press.
White, Carolyn. 2010. Gullah story teller. Video. https://youtu.be/3kY_0lXMeVM .
Wikitongues. 2011. Sea Island Creole English, Geechee, Gullah. Web page. https://wikitongues.org/languages/gul/.
Wikitongues. 2013. Caroline speaking Gullah and English. Video. https://youtu.be/iCd5W4gwJsI.
Wolfram, Walt A. & Natalie Schilling. 2016. *American English: Dialects and variation*. Hoboken, NJ: John Wiley & Sons.
Wolfram, Walt A. & Erik R. Thomas. 2002. *The development of African American English*. Malden, MA: Blackwell.