Vowel Shifting as a Marker of Social Identity in the Portuguese Dialect of Nordeste, São Miguel (Azores)

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Vários autores têm descrito a variedade do português falado na ilha de São Miguel (Açores,) mas nunca se analisou a fala dos micaelenses desde uma perspectiva sociolinguística contemporânea. Nesta obra, apresentamos uma análise quantitiva do dialecto da vila do Nordeste (São Miguel), em que se revela um sistema vocálico cuja variação oscila entre as pronúncias insulares das vogais tónicas e as formas correspondentes da língua padrão de Portugal. Por exemplo, enquanto todos os informantes no corpus pronunciaram a vogal tónica u *como a vogal alta anterior arredondada [y] (como a* u *de francês, [ü]):* uva = *[yva];* fruta = *[fryta], as produções das outras vogais no sistema variaram muito entre as formas características da ilha (*leite = *[let];* avô = *[avú];* vaca = *[vóka];* pouco = *[pök]) e as formas mais próximas à variedade padrão nacional. Esta variabilidade indica que uma nova variedade padrão do português micaelense tem se desenvolvido. Neste sistema linguístico se detecta uma tensão entre as acções articulatórias que são emblemáticas da identidade micaelense (como a [y] em lugar da* u*) e as que manifestam uma resposta comprometida às forças linguísticas da norma padrão portuguesa.*

As documented by several researchers in the field of Lusophone linguistics (Rogers; Silva; Blayer), the pronunciation of the dialect of Portuguese spoken on the island of São Miguel, Azores (Figure 1) is remarkably distinct from Standard European Portuguese. Those familiar with the phonology of Standard European Portuguese are often surprised to hear the unique timbres of the São Miguel variety, with its (1) extensive deletion of unstressed vowels

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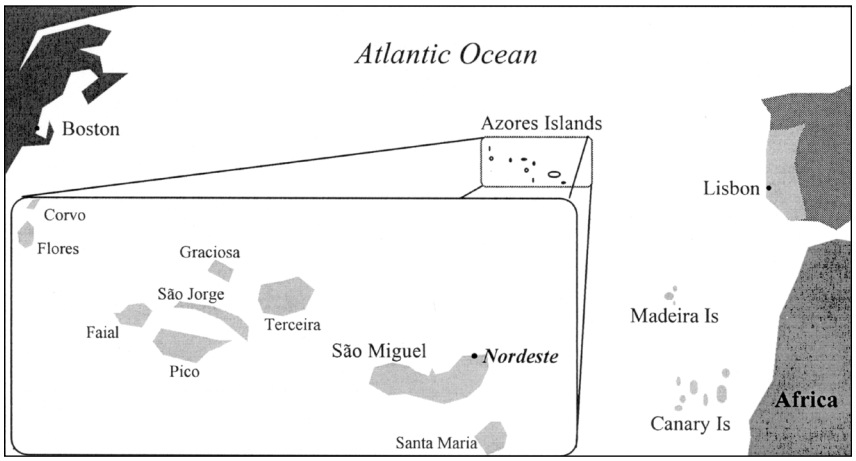


Figure 1. Location of Nordeste, São Miguel, Açores (Azores). Map not to scale.

(2) use of front rounded vowels (as found in French *tu* [ty] 'you' and *feu* [fø] 'fire'),[1] and (3) non-standard re-assignment of stressed vowels throughout the lexicon, such that *queijo* 'cheese' is pronounced as if it were spelled *quês, avô* 'grandfather' as if it were spelled *avu,* and *avó* 'grandmother' as if it were spelled *avô*. Perhaps no better exemplification of this discrepancy between the standard European pronunciations and corresponding São Miguel forms is that offered by Francis M. Rogers (*Atlantic Islanders,* 339):

> In Portuguese, *cabra* (with the vowel of *Bart*) is "goat" and *cobra* (with the vowel of *bought*) is "snake." Imagine my surprise when I was first told that a special *cobra* cheese had been prepared for me!

Representative examples of these pronunciation differences between Standard European Portuguese (SEP) and São Miguel Portuguese (SMP) appear in Table 1. As the data indicate, SEP stressed *ei* [ej] corresponds to SMP stressed *ê* [e]; SEP *ê* [e] corresponds to SMP *é* [ɛ]; SEP *é* [ɛ] corresponds to SMP [æ] (a vowel not found in SEP and, consequently, without a corresponding standard orthographic form), etc. Taken as a group, the correspondences in Table 1 reveal a complex but systematic phonological difference between the two dialects: the observed discrepancies in the pronunciation of stressed vowels have arisen from a historical counterclockwise shifting of the stressed vowels in São Miguel Portuguese, a linguistic phenomenon first observed by Rogers in the 1930's and later revised by Silva in the 1980's (*New Perspectives* 49). This "Portuguese Vowel Shift" is graphically represented in Figure 2.

Despite ample evidence in support of this general change in the vowel space of São Miguel Portuguese (relative to the standard language), there are

Table 1. Comparing the Stressed Vowels of São Miguel Portuguese (SMP) and Standard European Portuguese (SEP)

Correspondences *SEP*		*SMP*	*SEP*	*SMP*	Standard *Orthography*	
[u] *u*	~	[y] *	[uvɐ]	[yvɐ]	*uva*	'grape'
[o] *ô*	~	[u] *u*	[ɐvo]	[ɐvu]	*avó*	'grandfather'
[ɔ] *ó*	~	[o] *ô*	[ɐvɔ]	[ɐvo]	*avó*	'grandmother'
[a] *á*	~	[ɔ/ɑ] *ó* / *	[vakɐ]	[vɔkɐ/vɑkɐ]	*vaca*	'cow'
[ɛ] *é*	~	[æ] *	[sɛtə]	[sæt]	*sete*	'seven'
[e] *ê*	~	[ɛ] *é*	[pretu]	[prɛtu̯]	*preto*	'black'
[ej] *ei*	~	[e] *ê*	[lejtə]	[let]	*leite*	'milk'
[o(w)] *ou*	~	[ø] *	[poku]	[pøk]	*pouco*	'(a) little'
[oj] *oi*	~	[ø] *	[nojtə]	[nøt]	*noite*	'night'

Note: Per standard linguistic conventions, phonetic transcriptions appear in square brackets ([ ]) while corresponding standard orthographic forms are given in italic script. For those phonetic segments without standard orthographic counterparts (i.e. [ɑ æ y ø]), an asterisk appears. In many cases, the SMP forms manifest devoicing or deletion of word-final unstressed vowels, neither of which bears on the present discussion.

indications that the use of these shifted vowels by speakers of the dialect is not consistent. For example, Rogers writes that "the standard Portuguese (o) written *ô* is usually pronounced (u), in spite of the fact that I often heard the standard (o)" (*Pronunciation* 442). He also notes that more educated people on the island "tend to give up the [low back vowel] (a) [IPA [ɑ]], pronouncing the standard [low central vowel] (A) [IPA [a]]" (*Pronunciation* 471). Silva likewise indicates that in his participant observations during a visit to São Miguel,

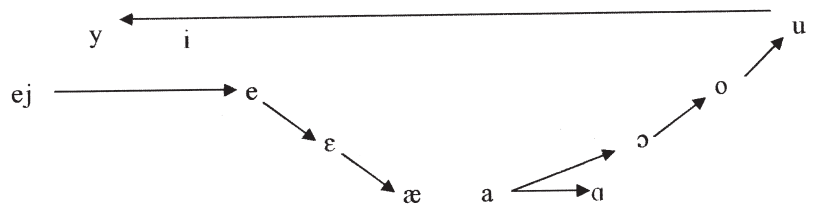


Figure 2. The Portuguese Vowel Shift (Silva, *New Perspectives* 49). The shift applies to stressed vowels only. Note the general counterclockwise movement of all vowels, save [i]. Not included here is the modification of SEP diphthongs *oi* and *ou,* both of which are typically realized as a front rounded [ø] in São Miguel Portuguese.

speakers of the dialect "did not always produce the predicted (i.e., shifted) forms of the language" (*New Perspectives* 68). The presence of language variation is not remarkable *per se;* what remains to be explored more fully are the social and linguistic factors that underlie these variable speech behaviors.

This paper builds on previous research regarding the pronunciation of stressed vowels in São Miguel Portuguese by extending a Labovian quantitative analysis to the observed variation between non-shifted (i.e. standard) and shifted (i.e. non-standard) forms in the entire vowel space. As will be demonstrated, the use of shifted vs. non-shifted vowels can be characterized in terms of several variables, including linguistic, social, and stylistic. In this regard, the variable speech behaviors of these rurally-situated subjects mirror those found in other well-studied Western urban speech communities (e.g. Guy; Labov; Labov, Yeager and Steiner; Milroy), in that a speaker's choice of a particular linguistic form often correlates with particular non-linguistic attributes. Within the specific context of the European Lusophone community, the use of the dialect-marked shifted vowels plays a significant role in creating social identity among the subjects interviewed. More specifically, the variability inherent in the use of "shifted" vs. "standard" vowel pronunciations is emblematic of the community's reaction to competition among three varieties of Portuguese: 1) Standard European Portuguese, a speech variety often heard via media sources but socially exogenous to the island; 2) the historically-rooted local dialect, a relatively stigmatized variety of Portuguese long associated with the island; and 3) a relatively younger local standard language, referred to by Rogers in the 1930's as "Luso-São-Miguelian." Distinct from both the national standard and the local vernacular, this more recently-developed local standard embodies a balance between two types of sociolinguistic phonological variants: forms that are stable, well-established markers of local identity versus forms that are more likely to vary depending on speech style, thereby representing linguistic compromises to prestige-motivated pressures from the standard.

Previous Research on São Miguel Portuguese[2]

Previous research on the linguistic structure of Azorean Portuguese speech varieties (including the variety spoken on São Miguel) has tended to be "rather scant" (Blayer 2) and unsystematic. The earliest published accounts appear in the late 1800's, including descriptions by Arruda Furtado, Gonçalves Vianna and Leite de Vasconcellos. These works all note the fact that the phonetic values of the stressed vowels of São Miguel Portuguese differ from their standard counterparts, and make much of the front rounded vowels [y] and [ø]. A more comprehensive account of Azorean Portuguese can be found in Rogers's 1940 doctoral dissertation, which includes a chapter dedicated to each of the nine Azorean islands. Rogers's research, which is based on the analysis of spontaneously occurring data collected primarily by means of observer participation, not only provides a description of each island's dialect, but also assesses the extent to which each insular variety compares to the national standard. Perhaps the most comprehensive descriptive account of Azorean Portuguese vowels appears some fifty years later in a doctoral dissertation by Irene Blayer, who employed traditional field methodology to record and describe in great detail the vocalic system on six of the nine islands. Blayer's work also includes a comprehensive overview of previous linguistic research on Azorean Portuguese.

As specifically regards São Miguel Portuguese, all authors writing about the dialect have commented on the fact that it is the most different from the standard language (Blayer 239; Rogers, *Pronunciation* 469). Blayer's description of Azorean speech patterns also makes clear that the phonetic manifestations of the language's vowel phonemes vary, as she meticulously notes such differences. She does not, however, seek to understand the source of this variation, as to do so would detract from the intent of her work, which was to characterize "the types of speech that best reflect the regional variations, as compared to the Standard Portuguese norm" (3). To this end, Blayer sought to minimize extralinguistic variation in her corpus by focusing her attention on "the normal, animated colloquial speech of uneducated, though, for the most part, literate people" (3) of the islands.

Subsequent publication of Rogers's initial research ("Insular Portuguese Pronunciation," *Atlantic Islanders*), along with explicit reference to the São Miguel Portuguese vowel system in Martinet's influential article "Function, Structure, and Sound Change," revealed the nature of the observed relationship between São Miguel Portuguese and the standard language, specifically in terms of a language-internal vowel shift. As Rogers and Martinet suggest, the observed system of stressed vowels in São Miguel Portuguese appears to have arisen as the result of a counterclockwise shifting of each element in the vowel space, save /i/. In later accounts of São Miguel Portuguese, Silva (*New*

Perspectives, "Sociolinguistic Variance") looks more carefully at potential historical antecedents of the vowel shift, finding reflexes of a similar but incomplete (or perhaps "reverse") shift in the speech of the Algarve region (see Maia). Based on his own fieldwork, which was smaller in scale but more structured and systematic than Rogers's participant-observation approach, Silva describes the stressed vowel system of an eleven-speaker sample and argues that the observed variation is the result of two interrelated shifts, a downward movement of the front vowels and an upward movement of the back vowels (see Figure 2).[3] Moreover, he comments on a fair degree of variability in the production of the stressed vowels in his corpus, noting that São Miguel Portuguese speakers often produced vowels more characteristic of the standard language.

In further analysis of data collected in the village of Nordeste, São Miguel, Silva explicitly pursues the issue of variability in a subset of the corpus: the low back vowels ("Sociolinguistic Variance"). He reports that the variable pronunciation of [a] (which alternates with back unrounded [ɑ] and open [ɔ] in São Miguel Portuguese) can be attributed to stylistic and social factors: [a] (the standard variant) is most often found in formal speech styles and is more readily controlled by speakers of higher socioeconomic groups; [ɔ] is used by speakers of lower socioeconomic status and in less formal speech styles; [ɑ] is used by members of the middle group and by younger speakers, and is readily found in reading speech. Silva concludes that there appear to be conflicting processes in the language: a prestige-motivated fronting of the low vowel to Standard [a] and a locally relevant regular sound change involving unrounding of a presupposed [ɔ] (as reported by Rogers).[4]

Such observations are consistent with Rogers's explanation of the "code shifting" (not a term he used) he observed on São Miguel in the late 1930's. The source of this code shifting is the presence of what Rogers labels "Luso-São-Miguelian" (*Pronunciation* 471):

> Luso-São-Miguelian is standard Portuguese superimposed on São-Miguelian, with the resultant interplay. However, as São-Miguelian is a fully developed dialect, the standard language has more difficulty in establishing itself. . . . Consequently, very cultured people speak a Luso-São-Miguelian, which is almost São-Miguelian, at least as far as the pronunciation is concerned.

As will be argued here, the national standard has failed to establish itself in the community—even a half century after Rogers's original work—with the variety known as Luso-São-Miguelian having risen to the status of the community's unequivocal local standard language. Any observed variation in the pronunciation of late 20th century Micaelenses, then, is less a matter of direct conflict between insular and continental varieties of Portuguese,

but more a matter of prestige-motivated shifting between standard and vernacular local forms.

The Research Issues

With previous accounts as a foundation, the current research seeks to address two issues. The first is to examine the extent to which variation between shifted and non-shifted (i.e. more standard) variants of the stressed vowels in São Miguel Portuguese extends beyond the low back vowels and into the entire vowel space. The second is to explore what extralinguistic factors might account for the observed variation between shifted and non-shifted forms. To these ends, the current work builds on Silva's 1988 research and demonstrates that while the effects of the Portuguese Vowel Shift persist in São Miguel, the extent to which an individual speaker employs the shifted system is dependent upon social and stylistic variables. For speakers who can be categorized as more economically advantaged, and in speech styles that are more formal, use of the insular variants gives way to more standard-sounding Portuguese vowels. There are, however, exceptions: the front rounded vowels [y] and [ø] persist in even the most careful speech.

Methodology

The data for this paper come from fieldwork conducted in September 1985 in the village of Nordeste, São Miguel. While in Nordeste, the author (a non-native speaker of Portuguese with cultural and familial ties to the community) collected data as both a participant-observer and a sociolinguistic interviewer. In the latter capacity, the author conducted tape-recorded interviews with twelve (12) residents of the village, eleven of whom are included in the current analysis. As documented in Table 2, the speakers for this study ranged in age from 17 to 80 years old; 8 were female, 3 were male. Of these, 5 (2 males and 3 females) had spent time living in the United States, while the other 6 were life-long residents of the village.[5] While this sample is admittedly small, it represents an arguably reasonable socio-economic cross-section of the village of less than 5,000 inhabitants.

As an indirect assessment of each subject's social status, conversations were initiated with a number of villagers (including some who were not recorded for the study) about relative differences among neighbors: who was better off than whom, who lived in a nicer house, who had a better job, etc. Based on a generally accepted sense for assessing relative status among villagers, each subject was initially assigned to one of three socio-economic categories: high, mid, or low.[6] As we shall see, however, the quantitative analysis

Table 2. Subjects Interviewed for This Study

Subject Code	Sex	Year of Birth	Years in the USA	Social Status
I	M	1905	40.0	Mid
B	F	1910	0.0	Low
M	F	1910	0.0	Mid
J	F	1920	0.0	Mid
D	F	1928	0.0	Low
L	M	1931	14.0	Mid
T	F	1935	0.0	Mid
E	F	1936	0.0	Low
F	M	1937	14.0	High
C	F	1942	24.0	High
V	F	1952	8.5	High

that follows does not support this tripartite socio-economic division of the community, but rather a simpler two-way distinction of "higher" vs. "lower."

Each subject was engaged privately with the author in a quiet room (typically in the subject's home) and asked to participate in an initial data elicitation activity: naming pictures of common objects (foods, animals, household implements, etc.). Subjects were then invited to participate in additional linguistic activities (as they felt capable and comfortable): reading two lists of short sentences, recording a message to a relative or friend in the United States, and talking about events in the past. Each interview, which lasted from approximately 10 to 20 minutes, was recorded using a lapel-clip style microphone and a compact audiocassette recorder. Upon his return to the United States, the author transcribed each interview twice, with a three month interval separating the two transcriptions; differences between the two were reconciled by a third and final listening. (The data for several subjects was subsequently digitized and subjected to more detailed instrumental acoustic analysis; additional relevant details are provided below.)

The data subjected to quantitative analysis in this paper have been limited to the two most formal speech styles elicited from the eleven subjects: picture naming (completed by all eleven subjects) and reading (completed by nine). There are three reasons for imposing this limitation on the analysis.

First, several days of participant observation conducted prior to conducting the formal interviews revealed that the casual, unmonitored speech of those living in Nordeste clearly manifested the shifted vowel system described by Rogers, suggesting a systematic use of the local vernacular (with its "shifted" vowels) in daily social intercourse. Consider, for example, a passage from one of the most otherwise conservative subjects, J, who has opted to send an "audio letter" to a former friend now living in the United States:

0:10.9 *já estive a dizer a teu neto que era muito—muito tua amiga*

[ʒɐ ʃtiv ɐ dzer ɐ te næt kɛrɐ mỹt^{h} mỹt ty ɐmigɐ]

['I was telling your grandson that (I) was very much—very much your friend']

J's speech presents a typical example of the community's speech patterns: the deletion of unstressed vowels in *estive, dizer* , *neto, que, muito* and *tua;* the reduction of the diphthong in *teu* (to [te]); and the shifting of vowel qualities (save *i*) throughout, as in *dizer* [dzer], *neto* [næt], and *muito* [mỹt]. Similar characteristics can be found in a passage from subject B, one of the oldest participants; here she discusses the visit of an American man some years ago, who came to ask her about indigenous plants and their medicinal uses:

0:03.4 = *tres vezes que ele teve aqui e ele era americano direitamente*

[trɛʒ veʒʃ kɨl tɛv ɐki i ɛl ær ɐmɛrikɑn diretɐmæ̃t^{h}]

['. . . three times that he was here, and he was (an) American for sure']

Here one notes the use of the low back variant [ɑ] in *americano,* as well as the low front vowel [æ] in both *era* and *direitamente*. On the basis of a more comprehensive analysis of the transcribed interview data, it was ultimately concluded that while there is some use of standard-like, unshifted stressed vowels under casual circumstances, their presence is quite limited.

A second—and intimately related—matter concerns statistical methodology. The procedure used in the quantitative analysis to follow requires that variation present itself throughout the data sample. In the more spontaneous speech analyzed for this study, however, four parts of the vowel shift manifest themselves without any variability: every case of *u* was pronounced as [y], every *oi* was realized as [ø], every *ou* as [ø], and every *ei* as [e]. The lack of variation among these forms in the conversational style made simultaneous analysis of all three speech styles impracticable.

Finally, focusing on more formal speech takes into account a critical operational limitation on the fieldwork: given that the interviewer was clearly identifiable as both a community outsider and a second-language speaker of a Standard European Portuguese, it is inevitable that the effects of the so-called "observer's paradox" need to be taken into account. As the mere presence of the non-native interviewer would encourage more standard-like linguistic behaviors, it can be argued that the most viable and methodologically transparent tack to take in the research would be to pay particular attention to those contexts in which more monitored speech (and, consequently, more standard-like forms) would be expected.

Given the limitations enumerated above, the research reported herein is

based primarily on the analysis of data from two relatively formal speech styles: picture naming and word-list reading. This corpus yielded a total of 830 stressed vowel tokens for statistical analysis, which were subsequently subjected to Variable Rule Analysis,[7] a variant of logistic regression developed specifically for use by linguists. The variable rule analysis developed below rests on two critical assumptions: 1) that the vowel inventory of the local vernacular (what Rogers called "São Miguelian") takes as its underlying form the shifted system illustrated in Figure 2; and 2) that São Miguel speakers have two options in producing a stressed vowel segment: to produce a local "shifted" variant or a more standard "non-shifted" variant. Consequently, the dependent variable under analysis can be conceptualized in terms of the following informal rule:

$$\begin{bmatrix} \text{V} \\ +\text{stress} \end{bmatrix} \longrightarrow \text{"local vernacular variant"} / \ldots$$

which is read "a stressed vowel is realized as a local São Miguel shifted variant under certain conditions," conditions which remain to be discerned with the aid of the statistical modeling algorithm (GoldVarb).

The dependent variable having been defined, a range of independent variables was then coded as possible contributors to the model. These included:

(1) Quality of the target vowel.
    The value of this variable was determined with reference to the standard language (e.g. *flor* 'flower' SEP [flor] ~ São Miguel Portuguese [flur] was coded as being an exemplar of the vowel phoneme *ô* /o/).
(2) Speech style/task.
    The factors are "picture naming" and "word list reading," with the first style understood to be less formal/self-aware than the second.
(3) Speaker characteristics, including:
    a) Age: Younger, Older (with the year 1930 chosen to divide the data)
    b) Gender: Female, Male
    c) Socio-Economic Group: High, Middle, Low
    d) Residency History: Returned immigrant, Life-long resident

Results

To begin, let us consider the relative percentage of "shifted" forms used by the speakers in each of the two speech styles. As can be seen in Table 3, over half of the stressed vowels in the corpus (59%) manifested the effects of the Portuguese vowel shift. The data also suggest that independent factors such as the quality of the target vowel and speech style contribute to the observed variation. As for vowel quality, the most frequently shifted forms are those corresponding with Standard Portuguese *u* (100%), *oi* and *ou* (96%), *ei*

Table 3. Frequency of Shifted Stressed Vowels (by Style)[a]

Std > S. Miguel	Picture Naming		Reading		Total	
ej > e	96%	49/51	69%	11/16	90%	60/67
e > ɛ	47%	16/34	33%	14/42	39%	30/76
ɛ > æ	52%	15/29	18%	6/33	34%	21/62
a > ɔ/ɑ	59%	136/230	7%	8/116	42%	144/346
ɔ > o	85%	40/47	92%	36/39	88%	76/86
o > u	41%	16/39	31%	5/16	38%	21/55
u > y	100%	45/45	100%	25/25	100%	70/70
oj/ow > ø	100%	25/25	93%	40/43	96%	65/68
TOTAL	**68%**	**342/500**	**44%**	**145/330**	**59%**	**487/830**

[a]Fractions to right of each percentage represent the number of tokens manifesting a shifted São Miguel form divided by the total number of tokens for a particular combination of vowel and speech style. Note the general pattern whereby vowels are less likely to be shifted in the more formal speech style (reading).

(90%), and *ó* [ɔ] (88%). These first three cases are noteworthy as they represent speech characteristics most frequently associated with São Miguel speech: fronting and monophthongization. In addition, data elicited by means of the less formal picture-naming task present shifted vowels 68% of the time; when asked to read, however, subjects produced shifted vowels less frequently (44%). When we consider vowel quality and speech style together, we find that the most marked change in behavior occurs in the production of the low vowel *a:* In the picture-naming context, *a* is moved to a more back position (either [ɔ] or [ɑ]) 52% of the time; in reading, however, the frequency of shifted *a* drops considerably to 7%. This difference suggests that the low vowel is most sensitive to the matter of style, thereby reinforcing the notion that shifted forms of the low vowel represent a markedly dispreferred, potentially stigmatized variant in Nordeste, as reported by Silva ("Sociolinguistic Variance").

In an attempt to understand more fully these effects, let us consider the results of Variable Rule Analysis. Preliminary passes through the statistical algorithm revealed that the factor groups for age, gender, and residency history were never selected as making a statistically significant contribution to the model. Moreover, a comparison of statistical models in which socioeconomic status was coded with three factors (upper, mid and lower) with otherwise identical models that combined "upper" and "mid" yielded no statistically significant difference ($p \leq 0.05$). As such, the final model contrasts "mid-upper" with "lower." The final model adopted for this paper is presented in Table 4.[8]

Table 4 Variable Rule Analysis Results[a]

Factor Groups	Factors	Factor Weight	
1. Vowel Correspondence	u > y	1.000	Preferred
	ow > ø	0.964	
	oj > ø	0.865	
	ɔ > o	0.774	
	ej > e	0.716	
	e > ɛ	0.177	Dispreferred
	a > ɔ/ɑ	0.139	
	ɛ > æ	0.137	
	o > u	0.110	
2. Speech Style	picture naming	0.698	Preferred
	reading	0.302	Dispreferred
3. Socio-economic Status	lower	0.642	Preferred
	mid - upper	0.358	Dispreferred

Note: Input probability=0.81; Number of cells=32; Totalχ^2=67.397; log likelihood=-369.1.

[a] Only those factor groups that made a statistically significant contribution to the quantitative model have been included. Note that the data for *u* > [y] were not directly included in the computation of this model, as the program disallows the presence of non-variable (categorical) factors; the factor weight of 1.000 is included for the sake of completeness.

In working with this final model, we find that the step-up/step-down function of the statistical algorithm reveals the most important factor governing the use of shifted variants to be vowel quality. The use of the high front rounded vowel [y] (equivalent to Standard *u* [u]) is categorical for all speakers, with use of the front rounded variants of orthographic *oi* and *ou* being nearly categorical. Shifting of open *ó* [ɔ] to close *ô* [o] is somewhat preferred (weight = 0.774), as is the use of the monophthong *ê* [e] in place of Standard *ei* (weight = 0.716). Factor weightings for the remaining vowel correspondences are all lower than 0.200, indicating that the shifting of these vowels, while still observed, is far less likely. These findings are significant as they corroborate the notion that a primary defining characteristic of the São Miguel vowel system is fronting, particularly the fronting of *u* to [y]. The data also confirm that the simplification of orthographic *ei* is common, as is the raising and closing of *ó* [ɔ] to *ô* [o]. To the contrary, we find the remaining four sets of vowel correspondences far less likely to participate in the shift. Assuming that the dispreferred correspondences are more likely than not to result in non-shifted, standard-sounding vowels, a rather curious-looking vowel space emerges:

- high back *u* [u] is fronted, leaving the space occupied by *u* vacant;
- *ou* and *oi* are simplified and fronted to [ø];
- the raising of open *ó* [ɔ] to the position of *ô,* combined with the relative stability of close *ô,* creates a merger of the mid back vowels;
- the simplification of *ei* to *ê* [e] likewise creates a merger, as close *ê* is not likely to lower to the position of open *é* [ɛ];
- open *é* [ɛ] and low central *a* are more likely than not to maintain the standard values.

The resulting vowel space is presented in Figure 3c.

These findings lead one to speculate about the current shape of the São Miguel Portuguese vowel space: whereas both the Standard vowel inventory and the "shifted" space of São Miguel Portuguese as presented in previous work were reasonably symmetrical, the vowel space in Figure 3c represents a highly marked distribution of vowel segments.

These patterns are further corroborated by instrumental acoustic analysis. Figure 4a displays the averaged values for the first formant (F1) arrayed against the difference between the second and first formants (F2–F1) for subject T in the word reading task (most formal).[9] Figure 4b, in contrast, presents these same seven vowels as spoken by native speakers of SEP (Martins). A comparison of the acoustic data in Figures 4a and 4b indicates that when producing the seven phonemic oral vowels of SEP, speaker T fronts the back vowel *u,* lowers both of the front vowels *ê* and *é,* and lowers and backs the low vowel *a*.

The data in Figures 4a and 4b provide important insight regarding the nature of the Portuguese Vowel Shift, as they suggest the presence of two distinct events: (1) a downward movement of the front vowels *ê* and *é,* which resulted in the retraction of the low vowel *a* and (2) a separate counterclockwise motion of the back vowels, led by the fronting of *u* into the position of front rounded [y]. In the case of Speaker T (Fig. 4a), we find that the while the front shift has been implemented, the back shift is "incomplete": *u* has moved forward but the mid back vowels *ô* and *ó* retain relatively standard

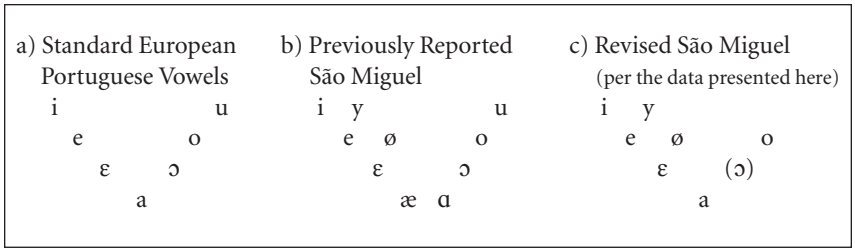


Figure 3a–c. A comparison of three Portuguese stressed vowel inventories. Note the exceptional lack of symmetry in the Revised São Miguel system. Considered cross-linguistically (viz. Crothers; Ladefoged and Maddieson), such a configuration of seven vowels is highly marked.

Figure 4a. São Miguel Portugese, Speaker T (female)

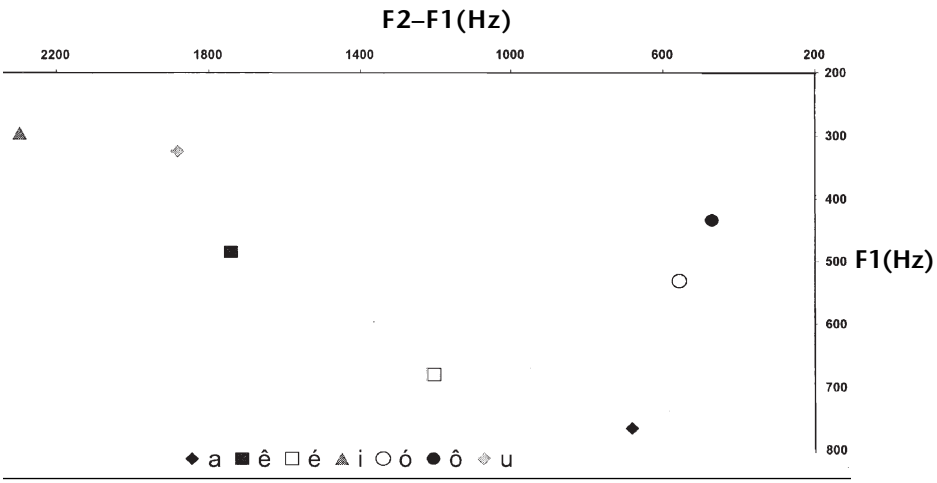
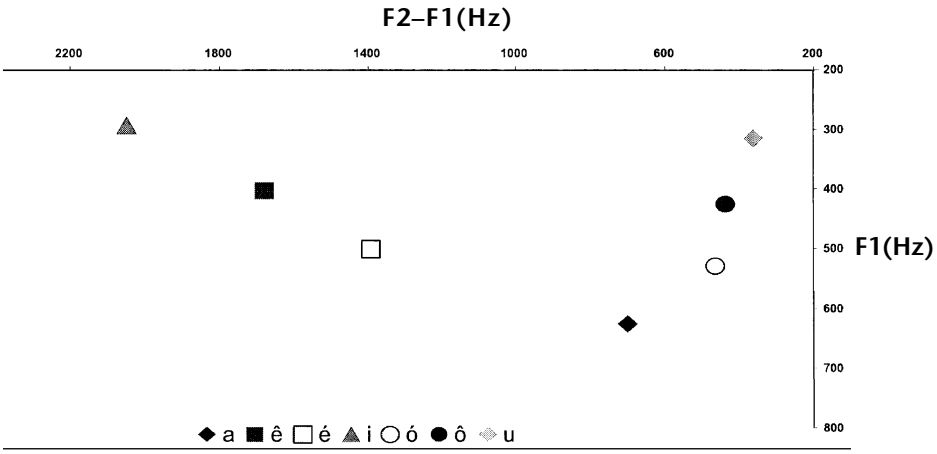


Figure 4b. Standard European Portuguese (Delgado Martins 1988, 9 speakers)



Note: Figures 4a and 4b show the relative location of stressed monophthongs *a, ê, é, i, ó, ô* and *u* as produced by a speaker of São Miguel Portuguese (4a) and several speakers of Standard European Portuguese (4b) (Delgado Martins 1988) as based on acoustic measurements. Note the location of SMP *u,* which is moved to the front of the mouth, adjacent to *i,* and the relative lowering of *a, ê,* and *é.*

positions. Other speakers, it should be noted, manifest vowels systems in which *ô* and *ó* have been shifted upward, thereby completing the back shift. Regardless of the degree to which the back shift has been implemented by any particular speaker, the conclusion drawn here supports Silva's 1986 claim: that the Portuguese Vowel Shift is, in fact, a pair of interrelated movements in the vowel space and not a single counterclockwise movement (as suggested by Rogers and discussed by Martinet).

The second most important factor in the analysis is speech style; more shifted variants are used in the less formal picture-naming task (weight = 0.698), while fewer are used in the more formal reading task (weight = 0.302). These results align with previously published findings about other speech communities in which speakers' increased use of standard variants typically manifests itself in more formal speech situations (See Chambers chapter 1 for an overview). The data also confirm suspicions regarding literacy effects at work in the community, with the more standard language forms being used in the presence of the standard orthography.

Finally, social class plays a role in the analysis, with members of the lower socioeconomic group making more use of shifted forms (probability = 0.642) than members of either the middle or upper groups (probability = 0.358). These data are partial confirmation that the non-standard "shifted" variants of the stressed vowels are representative of a speech style identified as less prestigious. Interestingly enough, there seems to be little evidence of an interaction between socioeconomic status and relative control of the standard in the two different speech styles: the data indicate that speakers belonging to the lower group tend to employ non-standard forms about half as often in the more formal reading style, a behavior paralleled by speakers in the upper/middle group. Thus it appears that socio-economic status is correlated with the overall degree to which a speaker uses standard vs. non-standard variants across both speech styles, and not with some ability to control one's use of a particular register.

Discussion

This snapshot of the speech community in Nordeste suggests that the language of the island appears not to have changed much since Rogers's work in the 1930's. More specifically, one continues to encounter significant variability in the phonetic realization of stressed vowels, with the indigenous "shifted" variants competing with their standard Portuguese counterparts. Consideration of the data from the more formal speech style, moreover, confirms the existence of Rogers's "Luso-São-Miguelian," which is interpreted here as assuming the role of an insular standard. This particular speech variety is in part a maintenance of forms that are characteristic of the islanders: use of the

front rounded [ø] and [y], and monophthongization of the diphthong [ei]. This speech variety, however, exhibits elements of compromise, especially in the use of the back rounded [ɔ] in place of standard [a] (Silva, "Sociolinguistic Variance"). Moreover, members of the speech community exhibit both an awareness of the standard language varieties and an ability to shift toward the standard in the presence of the orthography.

The data considered herein shed additional light on the interplay between the insular variety and the standard language, as they cast doubt on Rogers's claim that Luso-São-Miguelian is spoken primarily (if not solely) by the island's "more cultured people." From what can be discerned here, all of the subjects exhibited at least some capacity for employing standard variants in their speech. The extent to which any given speaker in the sample population would produce non-shifted standard forms was less a matter of "cultured vs. the masses," but rather a matter of social privilege that distinguishes the most poor from the rest (as well as distinguishing one speech style from another, a matter not raised by Rogers). Such a claim has consequences on how one understands the function played by the local dialect, as it suggests that the shifted vowel system indigenous to the island has become more closely aligned to these lower social classes, even to the point of quasi-stigmatization. As such, one might consider the entire shifted vowel system as a large-scale linguistic *stereotype* (Labov 179–80).

Indirect evidence of this stereotyped status is readily observed among members of the São Miguel community, who routinely suffer linguistic low self-esteem. In the course of collecting the data for this study, nearly every subject protested along the lines of, "Why would you want to record me? My Portuguese is so terrible!" It was also difficult to get access to those speakers belonging to the lower social stratum. The matter was not one of accessibility, but rather pride: the locals assisting in the location of subjects were loath to let me hear (much less record) examples of such poor Portuguese. The Micaelenses also suffer low status at the hands of other Portuguese speakers, who often refer to the inhabitants of São Miguel as "os japoneses" (ostensibly in jest). In the academic realm, the study of São Miguel Portuguese (and Azorean dialects in general) has garnered no significant attention in the latter half of the 20th century, thereby relegating any work on the dialect to the intellectual fringe. Such a constellation of phenomena support the notion that the status of São Miguel Portuguese continues to suffer, particularly in light of ever-increasing opportunities for communication with speakers of more standard varieties of Portuguese. With this shift in the status of "true São Miguel Portuguese" to a non-monitored local vernacular, we find the apparent elevation of Rogers's Luso-São-Miguelian to the status of the local standard.

All told, the observed variation in the data considered here is indicative of a very real social tension felt in the community, one whereby local identity (or

perhaps even loyalty) is confronted by pressures from the larger, more standard culture. Such pressures are exacerbated by the larger Lusophone world's historically negative evaluation of the São Miguel community and language. The linguistic response to such a conflict is correspondingly complex. In part, we observe a move by the members of the São Miguel Portuguese speech community to align themselves with the broader community of European Portuguese speakers by adopting more standard variants in stylistically appropriate contexts (so-called linguistic *markers,* as defined by Labov 178–80).

All the same, any decision to disassociate themselves from the local vernacular has limits, in that speakers have maintained speech behaviors clearly emblematic of membership in the São Miguel community. In this regard, three issues present themselves most clearly: the categorical use of the front rounded pronunciation of [y] for orthographic *u,* the nearly categorical use of front rounded [ø] for orthographic *oi* and *ou,* and the widespread reduction of diphthongs to simple vowels (manifested in this research by the shift of *ei* to *ê*). These forms, categorized as linguistic *indicators* (Labov, Bell), are readily associated with the community and are not subject to style-triggered variation. One is left to wonder if, in fact, these indicators have been phonemicized—reanalyzed as basic, underlying segments in the language—by residents of Nordeste. Participant observation suggests as much. For example, a note written by an elderly female Micaelense (now resident in the United States) included the orthographic forms *houje* for SEP *hoje* 'today' (pronounced [høʒ], with the fronting of the vowel influenced by the palatal aspect of the fricative sound *j*) and misspelled *poico* for SEP *pouco* 'few' (pronounced [pøk]).[10] More systematic analysis of the relationship between the São Miguel vernacular and the language's orthographic standards—particularly as manifested in the developing literacy skills of the island's children—should prove useful in better discerning the underlying system of vowel phonemes associated with this unique dialect of insular European Portuguese.

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Notes

1. Following linguistic convention, standard orthographic forms will be rendered in italic type. Corresponding phonetic realizations for each vowel will be rendered inside square brackets using the International Phonetic Alphabet (IPA). Note that IPA [y] represents the high front rounded vowel often represented by [ü]; IPA [ø] represents a mid front rounded vowel often rendered as [ö].

2. According to the web site for the Centro de Linguística da Universidade de Lisboa, there is a long-term on-going effort to create a dialect atlas of the Azores, the *Atlas Linguístico e Etnográfico dos Açores (ALEAç)*. To the best of our knowledge, publications by this research group have focused exclusively on lexical issues, and have yet to delve into matters phonological. For more information, visit <http://www.clul.ul.pt/sectores/projecto_aleac.html>.

3. Curiously, Rogers' 1940 analysis of the vowel shift alludes to separate front and back shifts. Later accounts, however, refer to a single counterclockwise movement of the stressed vowels. The reasons behind this subsequent simplification of the two-shift analysis remain unclear.

4. Quantitatively oriented research on the subject of vowel deletion in Azorean Portuguese (Silva "Variable Deletion," "Vowel Elision") provides additional evidence to support the claim that variable phonological processes in these speech varieties can indeed be characterized in terms of a complex of linguistic, stylistic, and social variables.

5. The fact that nearly half of the subjects in this study had spent time living in the United States is not at all unusual, as there has been a tremendous amount of emigration and subsequent re-immigration between all of the Azorean islands and North America (Serpa). The linguistic effects of this relationship between the Azores and Anglophone North America have merited some attention by researchers as early as 1937 (Mattos).

6. It merits explicit mention that off-island experience and social status are not wholly independent in Nordeste, as each subject who had spent time living in the United States was placed in either the high or mid socio-economic group; moreover, all those in the low group had never lived off-island. These correlations reflect the current social reality of Nordeste. Those who emigrate (typically to the United States and Canada) do so in part because they have sufficient resources. Moreover, those who return to Nordeste bring with them the relative wealth accumulated during their time in the New World. (See Esteves et al. and Serpa.)

7. GoldVarb, developed by Sankoff and Rand at the Université de Montréal, Canada.

8. In Variable Rule Analysis, a probability of 1.00 for a given factor indicates that the factor triggers the process under investigation 100% of the time; probability = 0.00 indicates that the factor never triggers the process; probability = 0.50 suggests that the factor is neutral. Probabilities in between the extremes are viewed as relative measure of a factor's "strength" in contributing to a model of variable rule application.

9. This particular organization of vowel formant data is a convenient (and standard) means of presenting the relative position of vowels in physical space inasmuch as arraying F1 (along the vertical axis) against F2–F1 (along the horizontal axis) yields

a graphical arrangement that reflects the approximate articulation location of each vowel in the oral cavity: the F1 axis corresponds to relative tongue height while the F2–F1 axis corresponds to the location of constriction along the front-back dimension in the mouth (with the left end representing the region nearest the teeth).

10. The extent to which adopting these non-prescriptive spellings is a manifestation of a larger strategy of linguistic hypercorrection remains to be investigated. It is worth noting that the SMP speech data analyzed in this study did not present any cases of hypercorrect speech, a characteristic often found in sociolinguistic studies in which social identity plays a central role (e.g. Labov's "Martha's Vineyard" study, included in *Sociolinguistic Patterns*). Further research may shed additional light on this matter.

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