SOCIOPHONETICS OF [r] IN AKAN

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The study interrogates what has hitherto been called 'free variation' in Akan (cf. Schachter and Fromkin (1968), Dolphyne (1988), and Abakah (2004)), i.e., the alternation of [r], [l] and [d] in intervocalic position (V_V) and the alternation of [r] and [l] at the second consonant (C_2) position of a CCV syllable structure in various dialects of the language. The study follows the quantitative sociolinguistic approach pioneered by Labov (1966) to investigate the extent to which the choice of one rather than the other of these sounds is not free but is dependent on the social backgrounds of speakers (described in terms of their age, gender, educational background and what dialect of Akan they speak). Interview and picture elicitation were the primary instruments of collecting data from 120 respondents (60 speakers of Asante and Fante respectively). The study did not uncover any major dialectal difference in the alternation between [r] and [l] but finds that [d] is decidedly an Asante variant that competes with the other two sounds in the speech of adults. The data however shows that the social variables age, level of education, and gender do influence the choice of [r] versus [l] in both Asante and Fante. Young, educated speakers, especially female speakers, demonstrated a higher tendency of using the [r] variant, which seems to have emerged as the most prestigious of the three variants.

1. Background

The distribution of [r], [l] and [d] in Akan words has piqued the interest of linguists. Schachter (1962) and Schachter and Fromkin (1968) were the first to study these sounds in detail. Schachter and Fromkin (1968) establish that [d] and [r] are in complementary distribution in Akan, arguing that:

> The surface realizations of progressive, however have the initial [r] (except in those in which the CV form of the morpheme is replaced by another form by means of P-rules. As noted… [r] does not normally occur initially in native Akan morphemes, but is, instead, in complementary distribution with [d] which occurs only morpheme initially (that is at the systematic phonemic level, [d] and [r] are not distinct) (p. 124-5).

They are of the view that [l] is not a native Akan sound, that it is a sound borrowed by Akan speakers who alternate it with [d] and [r].

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Dolphyne (1988:42-3) also sees [r] and [d] as being in complementary distribution in some environments, which she describes as follows:

…[d] and [r] complement each other in their distribution, since [d] occurs mainly in stem-initial position, and [r] mainly in stem-medial position… (p. 43)

Dolphyne highlights the free variation of [r], [d] and [l] when she observes that they "are members of the same phoneme, …different pronunciation of the same basic consonant," (p. 43) that alternate in intervocalic position in some words in Fante and Asante, as in:

(1) Fante: ɔlɛ / ɔrɛ / ɔdɛ   'he says' (p. 43)

(2) Asante: akɔlaa / akɔraa / akɔdaa   'child' (p. 43)

Like Schachter and Fromkin (1968), she argues that [l] is a borrowed sound "that mainly occurs in loan words such as 'lorry', 'ball'" (p. 42).

Abakah (2004) is the most comprehensive work on the distribution of the three sounds. Essentially, he disagrees with Dolphyne's position that on the one hand [r] and [d] are in complementary distribution in the environments she referred to. On the other hand, he agrees that the three sounds ([r], [d] and [l]) are in free variation in the intervocalic position in some other words. There are two distinctive aspects of his work, however. One is his stance that the three sounds are nonetheless contrastive (i.e., phonemic) in some words, as in the following pairs (p. 35):

(3) **duro** 'a bunch (of say, banana)'
    dudo 'concocted medicine'
(4) **bɔri** 'poison'
    bɔdi 'tumor'
(5) **kwasiara** 'Kwasi only'
    kwasiada 'Sunday'

The other distinctive aspect of his work is his stance that [l] is not a borrowed sound. In this respect, he argues that [l]

…occurs at word-initial position in words, including the following, some of which may have started off as slang but are regular / formal words today… At word-initial position, it appears [l] is not in free variation with either [d] or [r]. At least, we have so far not heard of any speaker producing any of the above words with an initial [r] or [d]. (p. 45)

The examples he gave are (p. 45):
(6) [lotoo] 'filthy teeth'
(7) [lætenĩ] (Fa-An.) 'a liar'
(8) [latˢɪɪ] (Fa) / [latɪɪ] (Ak.As.) 'stuff'

The current study focuses on what these studies have called 'free variation', i.e., the alternation of [r], [l] and [d] in intervocalic position (V_V), as illustrated in examples (1) and (2) above, and the

alternation of [r] and [l] at the second consonant (C₂) position of a CCV[1] syllable structure in Asante, Fante and other dialects of Akan as illustrated in examples (9) and (10) below:

(9) **bra** / **bla**   'come'
(10) **frɛ** / **flɛ**   'call'

The objective is to interrogate the extent to which the choice of one rather than the other of these sounds in the above-mentioned environments is not free but is dependent on the social backgrounds of speakers who use them. The research question, therefore, is: "To what extent do native speakers' sociolinguistic backgrounds (described in terms of their age, gender, educational background and the dialect of Akan they speak) define their choice of one rather than the other of these sounds in the two environments?" The work was pursued within the Variationist Sociolinguistics paradigm.

The organization of the remainder of paper is as follows: Section 2 reviews the related literature and we explain our methodology for data collection and the theoretical framework in section 3. Section 4 is devoted to data analysis. Our concluding remarks appear in section 5.

2. Literature Review

In discussing the consequences of free variation on grammar, Kager (2004) opines that the fact that variation is 'free' does not imply that it is totally unpredictable. He argues that a wide range of extra grammatical factors, including sociolinguistic variables (gender, age and class, etc.), do influence the choice of one rather than the other of the sounds that are seemingly freely alternated. We shall discuss just a few of those studies where social factors have accounted for so-called free variation.

Al-Ali and Arafa (2010) worked with speakers of Jordanian Arabic in Irbid, some of whom realized fricative /θ/ as [t] and [s]. For example, their alternation in [θala:t], namely [tala:t] [sala:t] 'three'. The fricative /ð/ could be realized as either [d] or [z] in a word like [ðahaba], namely [dahaba] and [zahaba] 'he went'. From the perspective of the variationist sociolinguistics paradigm, the framework they used in analyzing their data, /θ/ is seen as a phonetic variable that has three realizations or variants, [θ], [s] and [t], while the variable /ð/ has [ð], [d] and [z] as its variants. Al-Ali and Arafa's auditory analysis revealed that educational setting of respondents influenced their choice of variant and that females preferred more non-local variants than males. Thus, men and individuals with high school education have a higher tendency to maintain local variants [θ] and [ð] whereas women and individuals with university education have a higher tendency to adopt non-local prestigious variants [t], [s] and [d] and [z].

Ammour (2012) similarly examined the phonetic variable /ɖ/ which had two variants, [ʈ] and [d] in the Nedroma Arabic dialect in Algeria; for instance, their alternation in [biiʈ] and [biid] 'eggs' brings about no distinction in meaning. They also investigated the variable /ʤ/ which has

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[1] CCV is not a basic syllable structure in Akan. The CCV structure in the language is only a phonetic form of a basic two-syllable string of CVrV that has been re-syllabified or restructured following a reduction in one. In the realization of CrV, there occurs an elision of the vowel in the preceding CV structure (Marfo and Yankson, 2008).

three variants [dʒ] [g] and [ʒ] in the use of a word like [dʒəzzaːr], [ʒəzzaːr], and [gəzzaːr]'butcher'. Their investigation revealed that the alternation is speaker-sensitive, i.e., it is socially conditioned by the educational status, age, and gender of speakers. For instance, males used more of [ɖ] and avoided [ʈ] because they tend to be more accommodating to other dialects as they are more exposed to many contact situations whereas women spend most of the time at home, hence their adoption of [ʈ]. The study also revealed that educated persons are likely to use [ʈ] while the young tend to avoid the traditional forms and use new forms.

Gordon (2001), in his study, drew samples from different locations in Michigan and was able to examine the interaction of three important social variables (location, age and gender) and the shift of vowels as well as the choice of linguistic variants, e.g., the alternation of [æ] and [ɛ] in [ænt] and [ɛnt] 'ant' in English words in the speech of speakers. He found that the choice of either [æ] or [ɛ] was influenced by the social variables studied. Using a multiway analysis of variance, he found that sex and age showed significant interaction in the choice of vowels. He also found that shifting of the vowel was more common among women than girls but was also more common among boys than men. In another study of sociophonology of English, Lawson et al. (2011) assessed the social stratification of the tongue shape for postvocalic [r] in Scottish English. The results revealed the social stratification of [r] at the articulatory level, with middle class speakers using bunched articulation, while working class speakers use greater proportions of tongue–tip and tongue-front raised variants. There was also some gender differentiation between the working-class males and females, with working class males using the most weakly rhotic variants than working class females. Tan (2012) did a similar study. He emphasized that the choice of either postvocalic–r or intrusive -r showed that there is a direct correlation between the educational level and socioeconomic status of speakers and their production of postvocalic–r and intrusive–r in Singaporean English. She found that speakers with higher education and socioeconomic status have a higher tendency to produce the postvocalic-r while speakers with lower education produce the intrusive-r.

Inusah, Amuzu and Akanlig-Pare (2019) tried to elucidate the social factors that accounted for what appears to be free variation of [r] and [l] in some words in Dagbani. Examples of words investigated are the name [labi], realized also as [rabi], and [liga] 'dress', realized also as [riga]. The findings revealed [r] is prevalent in the speech of males and the older generation while [l] is frequent in the speech of females and the younger generation. Overall, however, [l] has become the more dominant variant although it is the newer form.

Another example of research on socially constrained phonetic or phonological variation in West Africa is Folajimi et al. (2019) who examined the realization of English /θ/ as [t] and [s] by educated Nigerians. From the 729 tokens they collected, the analysis indicated that most of the speakers preferred to realize the variable in order of preference as [t] (356 tokens), [θ] (344 tokens) and [s] (29 tokens). The findings indicate that /θ/ variation in Nigerian English is sometimes affected by sociolinguistic factors, in particular gender. Folajimi et al. disclosed that female speakers significantly favoured [θ] more than [t] while male speakers used more [t] than the female counterparts. Though age did not have an impact, ethnic group (Yoruba vs Igbo) was very significant.

In what follows, we try to show that the alternation of [r], [l] and [d] in intervocalic position and the alternation of [r] and [l] as second consonant in the CCV syllable structure in some Akan words are as socially constrained as the cases discussed above.

3. Methodology and Theoretical Framework

3.1 Methodology
The methodology employed in this study is based on Hudson's (1996) outline of stages in conducting a quantitative sociolinguistic study. Hudson's first stage focuses on the selection of speakers, the circumstances of data collection, and the linguistic variables. Regarding selection of speakers, bearing in mind our research question, we settled for judgment sampling. We carefully selected 120 respondents fairly distributed in terms of dialect, gender, age, and educational background. The fieldwork was carried out at two sites: New Tafo, an Asante dialect speaking community, and Mankessim, a Fante dialect speaking community. The distribution of respondents according to dialect and gender is presented in Table 1 below.

Table 1: Dialect and gender distribution of respondents

Dialect	Fante	Asante	Total
Male	30	30	60
Female	30	30	60
Total	**60**	**60**	**120**

In Table 2 we show that 64 out of the 120 respondents had formal education and 56 had none. The table shows the age breakdown of those educated and those uneducated. Although genuine effort was made to ensure parity in the sampling across the age and the educational status variables, we needed to make some adjustments. For example, we did not find 'uneducated' children under 10 to sample because all children of this age were in school at the field work site.

Table 2: Educational status and age distribution of respondents

Age	Educated	Uneducated	Total
below 10	20	0	20
15-29	20	16	36
30-50	12	20	32
above 50	12	20	32
Total	**64**	**56**	**120**

The linguistic variable for the study is [r] which has three variants [r], [d] and [l]. For the purpose of this study, words containing [r], here **awareɛ** 'marriage', **afɔreɛ** 'tithe' and **praeɛ** 'broom', are treated as the citation/basic forms simply because they are the ones recognized in the orthography of Akan. We settled on these specific words because we anticipated (correctly) that respondents will be familiar with the entities or concepts they represent and will thus respond readily to prompts or instruments we used in the elicitation exercises.

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The second of Hudson's (1996) stages is the collection of the data for the study. Interview and picture elicitation were the instruments used for the collection of data. Respondents were informed prior to the commencement of the interview that they would be recorded and that their consent was required. All respondents were native speakers of their respective dialects and because the researchers were not residents of the two communities, snowballing was used to select them. The interviews revolve around topics on biographical information, education, family, marriage, church and house chores and Akan was the primary language used for the data collection. The interviews were casual and conversational, not formal question and answer sessions. For the respondents to produce the needed variants [r], [l] and [d] in Akan, colour pictures were printed on large sheets of paper for them to describe, i.e., they were not merely asked to pronounce words in Akan which had the variants. The images presented to the respondents were a ring on the ring finger, a wedding couple, a hand in an offertory bowl in church, and a broom as shown below.

While respondents were describing the pictures, questions were asked to elicit the target words referred to above. The respondents had no fore knowledge of the fact that the research was about the alternation of [r], [l] and [d]; they were given the impression that we wanted to know more about the Akan culture.

Hudson's third stage focuses on identifying linguistic variables and their respective variants. The data extracted (and coded as 1=[r], 2= [l], and 3= [d]) was analyzed using the SPSS software following stage four procedures. In section 4, we shall present the data analysis as well as the interpretation/discussion of the data (stage five of Hudson's procedure).

3.2 Theoretical Framework

The approach used in the study is Labov's Variationist Sociolinguistic Theory, propounded in 1966; its other name is Labovian Sociolinguistics. The central idea is that the variation (called *linguistic variation*) witnessed at all levels of language (phonetic, phonological, morphological, etc.) is not random, that it will be found to be systematic and related to some social factors (called *social variables*) such as class, age, gender, socioeconomic status and education, and dialect of

speakers. This is a study of phonetic variation where a sound intended may be actualized in one of three sounds: ([r], [l], or [d]). The three are variants of the intended sound, which is a *phonetic variable*. The theory enjoins the researcher to work out whether and to what extent each variant may be statistically matched with specific categories of speakers (i.e., categorized in terms of age, dialect, educational background, and gender).

4. Analysis and Discussion

This section contains the presentation, interpretation, and discussion of the results of the data collected for the study. The first part of the analysis is limited to establishing the variation while the second section focuses on the relationship between the choice of a variant and the social variables used for the study. The final section deals with the interaction between the social variables and the choice of a variant.

4.1 Establishing the variation

The frequency of the choice of variants in Akan is presented in Table 3. The analysis shows that [r] is the dominant variant chosen by speakers in all the words used in Fante. The variant [l] comes next for the Fante speakers and [d] was the least chosen variant by them. For the Asante speakers, [r] was the dominant choice in two of the target words **awareɛ** and **praeɛ** but /d/ emerged as the dominant choice with respect to **afɔreɛ**.

Table 3: Frequency of the choice of variants in Akan

Dialect	words	Variants			Total
		r	l	d	
Asante	awareɛ	32	21	7	60
	% of count	53.3%	35.0%	11.7%	
	afɔreɛ	25	8	27	60
	% of count	41.7%	13.3%	45%	
	praeɛ	34	26		60
	% of count	56.7%	43.3%		
Fante	awareɛ	34	26		60
	% of count	56.7%	43.3%		
	afɔreɛ	43	16	1	60
	% of count	71.6%	26.7%	1.7%	
	praeɛ	34	26		60
	% of count	56.7%	43.3%		

The cross-tabulation analysis in Table 3 presents the number of speakers by their respective dialects and the frequency of [r], [l] and [d] of each target word. The table illustrates that the dominant variant in Akan is [r], i.e., Akan speakers are more likely to use the [r] variant than [l] and [d] in speech. The percentages of the different dialects for /r/ and /l/ are very close so dialectal difference seems not to be very relevant in accounting for the alternation between /r/ and /l/. However, there is a major dialectal difference in the use of [d]; except for one occurrence, all instances of [d] were registered in the Asante data.

4.2 Explaining the variation

As seen in the section above, the sounds [r], [l] and [d] are in free variation among certain Akan speakers and they are more likely to use the [r] variant cross-dialectically in speech. This section shows the relationship between the use of each variant and the social variable of education, age, and gender.

4.2.1 Educational status and the choice of a variant

The relationship between educational status of respondents and the choice of a variant in the two dialects is presented in Table 4 and Table 5. The analysis shows that cross-linguistically, educated speakers of Akan are more likely to use a higher frequency of [r].

Table 4: Choice of a variant between Educated Asante and Fante Speakers

		Variants			
Dialect	**words**	**r**	**l**	**d**	**Total**
Asante	awareɛ	23	7	2	32
		71.9%	21.9%	6.2%	
Fante	awareɛ	23	9		32
		71.9%	28.1%		
Asante	afɔreɛ	17	3	12	32
		53.1%	9.4%	37.5%	
Fante	afɔreɛ	26	6		32
		81.3%	18.7%		
Asante	praeɛ	23	9		32
		71.9%	28.1%		
Fante	praeɛ	26	6		32
		81.2%	18.8%		

Table 4 shows the number of educated speakers, their respective dialect and the frequency of the variants in each target word. Educated Asante and Fante speakers used a higher frequency of the [r] variant for each of the target words than the [l] and [d] variants. In contrast [d] competes somewhat with [r] among educated Asante speakers; in fact, [d] is not used by educated Fante speakers in the three words.

Table 5 presents the alternation of the variants in the target words by both uneducated Asante and Fante respondents. The table shows the counts and percentages of the number of speakers who used specific variants. We find that uneducated Asante and Fante speakers used a higher frequency of [l] than [r] and [d] in two of the target words. Although [d] is uniquely Asante, an uneducated Fante speaker used it in an interview; we were unable to find out more about this speaker, whether he speaks Asante or not.

Table 5: Choice of a variant between Uneducated Asante and Fante Speakers

Dialect	words	Variants			Total
		r	l	d	
Asante	awareɛ	9	14	5	28
		32.1%	50.0%	17.9%	
Fante	awareɛ	11	17		28
		39%	60.7%		
Asante	afɔreɛ	8	5	15	28
		28.6%	17.9%	53.5%	
Fante	afɔreɛ	17	10	1	28
		60.7%	35.7%	3.6%	
Asante	praeɛ	11	17		28
		39.3%	60.7%		
Fante	praeɛ	8	20		28
		28.6%	71.4%		

The findings therefore reveal that there is a stronger variation in the use of the free variants in terms of formal education. It appears that educated Akan speakers (across the dialects) prefer [r], a tendency which has the potential to brand [r] as the prestigious variant. It is also possible that [r] has already acquired a superior status because it is what appears in the standard orthography in words that exhibit the [r], [l], and [d] alternation, as shown in the spelling of the three target words in Akan texts. This finding is not different from studies by Tan (2012), Ammour (2012), and Al-Ali et al. (2010). These works have found that the tendency to use different forms of pronunciation correlated with the educational statuses or levels of speakers, beside other factors.

4.2.2 Age and the choice of a variant
The relationship between age of the respondents and the choice of a variant is presented in Table 6 and 7. Even though the age distribution is not even, the analysis shows that the use of [r], which, as noted, is the dominant variant, appears to be most preferred in all age groups. Although the relationship between age and a variant choice is not as consistent as with the other social factors, a closer look at the data, in fact, indicates that interesting differences can be found.

Table 6: Age range and the choice of a variant by Asante speakers

Dialect	Word	Age range	Variants			Total
			r	l	d	
Asante	awareɛ	below 10	4	6	0	10
			40.0%	60.0%	0%	
		15 to 29	12	5	1	18
			66.6%	27.8%	5.6%	
		30 to 50	8	5	3	16
			50.0%	31.2%	18.8%	
		above 50	7	6	3	16
			43.8%	37.5%	18.8%	
Asante	afɔreɛ	below 10	6	3	1	10
			60.0%	30.0%	10.0%	
		15 to 29	10	2	6	18
			55.6%	11.1%	33.3%	
		30 to 50	4	2	10	16
			25.0%	12.5%	62.5%	
		above 50	5	1	10	16
			31.3%	6.2%	62.5%	
	praeɛ	below 10	3	7		10
			30.0%	70.0%		
		15 to 29	11	7		18
			61.1%	38.9%		
		30 to 50	10	6		16
			62.5%	37.5%		
		above 50	10	6		16
			62.5%	37.5%		

Table 7 presents the number of Asante speakers, their age ranges and the frequency of the variants chosen in each word. The table shows that [d], which, as noted, is uniquely Asante, seems to be prevalent in the speech of speakers who are 30 years and above. The table also reveals that in the use of the target words *afɔreɛ* and *awareɛ*, the Asante speakers 30 years and above predominantly used the [d] variant while respondents below 10 years used it sparingly. Respondents between 15 and 29 used a higher frequency of the [r] variant as that variant seems to be the preferred one among the age groups. Similarly, as indicated in Table 7 below, Fante speakers in the various age groups used a higher frequency of [r] in all target words.

Table 7: Age range and the choice of a variant in Fante speakers

Dialect	word	Age range	Variants			Total
			r	l	d	
Fante	awareɛ	below 10	4	6		10
			40.0%	60.0%		
		15 to 29	12	6		18
			66.7%	33.3%		
		30 to 50	10	6		16
			62.5%	37.5%		
		above 50	8	8		16
			50.0%	50.0%		
	afɔreɛ	below 10	5	5		10
			50.0%	50.0%		
		15 to 29	14	4		18
			77.8%	22.2%		
		30 to 50	11	4	1	16
			68.8%	25.0%	6.2%	
		above 50	13	3		16
			81.2%	18.8%		
	praeɛ	below 10	6	4		10
			60.0%	40.0%		
		15 to 29	13	5		18
			72.2%	27.8%		
		30 to 50	8	8		16
			50.0%	50.0%		
		above 50	7	9		16
			43.8%	56.2%		

The main conclusion to be drawn from the data regarding the distribution of the three variants in relation to age is that [r] is the most preferred by speakers between 15 and 50 while older people (above 50 years) and young people (10 years and below) show ambivalence in the choice between [r] and [l]. There was only one occurrence of [d] in the Fante data, as pointed out earlier.

4.2.3 Gender and choice of variant

The relationship between gender of respondents and the choice of a variant is presented in this section. Table 8 shows that, relatively, [r] was the common variant used by female Asante speakers while [l] and [d] were prevalent among the males. The table reveals that the female respondents led in the use of /r/ in all the words.

Table 8: Gender and the choice of a variant in the Asante dialects

			Variants			
Dialect	Word	Gender	r	l	d	Total
Asante	awareɛ	Male	15	12	3	30
			50.0%	40.0%	10.0%	
		Female	17	9	4	30
			56.7%	30.0%	13.3%	
Asante	afɔreɛ	Male	6	7	17	30
			20.0%	23.3%	56.7%	
		Female	19	1	10	30
			63.4%	3.3%	33.3%	
Asante	praeɛ	Male	14	16		30
			46.7%	53.3%		
		Female	20	10		30
			66.7%	33.3%		

The same picture emerges in Table 9 above regarding Fante speakers: Female speakers use a higher frequency of [r] than [l] in all the target words in speech as compared to the male speakers. The findings from this section feed into Labov's (1990:205) principle on gender and linguistic variation which asserts that women prefer variants with overt prestige whilst men do the opposite. The data reveals that females lead in the use of the /r/ variant which has been established as the most prevalent while the males lead in the use of /l/. The finding is similar to findings in Al-Ali and Arafa (2010) and Folajimi et al. (2019). In these studies, women led their male counterparts significantly in the usage of the dominant and prestigious variants.

Table 9: Gender and the choice of a variant in the Fante dialect

			Variants			
Dialect	Word	Gender	r	l	d	Total
Fante	awareɛ	Male	14	16		30
			46.7%	53.3%		
		Female	20	10		30
			66.7%	33.3%		
	Afɔreɛ	Male	19	10	1	30
			63.4%	33.3%	3.3%	
		Female	24	6		30
			80.0%	20.0%		
	Praeɛ	Male	16	14		30
			53.3%	46.7%		
		Female	18	12		30
			60.0%	40.0%		

4.3 Interaction of social variables with choice of phonetic variants

In this section, a co-variation analysis is done to determine the interaction of some social variables with the choice of the phonetic variants. First, we consider whether the choice of the phonetic variants can be attributed to the interaction of education and gender. We then discuss the interaction of education and age.

In the discussion in section 4.2.1, it was established that educated Akan speakers use the [r] variant and that their uneducated counterparts use the [l] variant more; the variant [d] is exclusively an Asante variant, as it was used mainly by educated and uneducated Asante males in specifically the target word **afɔreɛ**. Now, in Table 10, we present the interaction between educated males vs females (in their respective dialects) and the frequency of choice of variants in the target words. The table shows that educated Asante and Fante females lead their educated male counterparts in the use of [r]. The picture that emerges from Table 11 is that uneducated males in both dialects lead the uneducated females in the use of [l]. In any case, these patterns of preference by educated Akans seem to validate the opinion that [r] is the more prestigious variant among the three.

Table 10: Interaction between gender and educated Asante and Fante speakers in the choice of a variant

| Dialect | Word | Educational status | Variants | | | Total |
			r	L	d	
Asante	awareɛ	Educated Male	10 62.5%	5 31.25%	1 6.25%	16
		Educated Female	13 81.3%	2 12.5%	1 6.2%	16
	afɔreɛ	Educated Male	5 31.2%	3 18.8%	8 50.0%	16
		Educated Female	12 75.0%	0 0%	4 25.0%	16
	praeɛ	Educated Male	11 68.8%	5 31.2%		16
		Educated female	12 75.0%	4 25%		16
Fante	awareɛ	Educated male	9 56.2%	7 43.8%		16
		Educated female	14 87.5%	2 12.5%		16
	afɔreɛ	Educated Male	12 75.0%	4 25.0%%		16
		Educated female	14 87.5%	2 12.5%		16
	praeɛ	Educated male	12 75.0%	4 25.0%		16
		Educated female	14 87.5%	2 12.5%		16

Table 11: Interaction between gender and uneducated Asante and Fante speakers in the choice of variants

Dialect	Word	Educational status	Variants			Total
			r	**L**	**d**	**Total**
Asante	awareɛ	Uneducated Male	5 35.7%	7 50.0%	2 14.2%	14
		Uneducated Female	4 28.6%	7 50.0%	3 21.4%	14
	afɔreɛ	Uneducated Male	1 7.1%	4 28.6%	9 64.3	14
		Uneducated Female	4 28.6%	1 7.1%	9 64.3	14
	praeɛ	Uneducated Male	3 21.4%	11 75.6%		14
		Uneducated female	8 57.1%	6 42.9%		14
Fante	awareɛ	Uneducated male	5 35.7%	9 64.3%		14
		Uneducated female	6 42.9%	8 57.1%		14
	afɔreɛ	Uneducated Male	7 50%	6 42.9%	1 7.1%	14
		Uneducated female	10 71.4%	4 28.6%		14
	praeɛ	Uneducated male	4 28.6%	10 71.4%		14
		Uneducated female	4 28.6%	10 71.4%		14

We now turn to the cross-tabulation of education and age in tables 12 to 15. What emerges is that educated speakers across all ages seem to use a higher frequency of [r]. The educated Akan speakers in the 15-29 age bracket have a preference for [r] and it is they who seem to be promoting the tagging of [r] as the prestigious variant among the three. In other words, it is this group, the educated Akan youth, who appears to be leading the marginalization of the [l] and the [d] variants. This narrative seems to be different with respect to the uneducated speakers of both dialects. There seems not to be any major difference in the use of the variants by the uneducated speakers of both genders in Akan.

Table 12: Interaction between age range and educated Asante speakers in the choice of variants

Dialect	Word		Variants			Total
			r	l	d	
Asante	awareɛ	below 10	4	6		10
			40.0%	60.0%		
		15 to 29	9	0	1	10
			90.0%	0%	10.0%	
		30 to 50	5	1	0	6
			83.3%	16.7%	0%	
		above 50	5	0	1	6
			83.3%	0%	16.7%	
Asante	afɔreɛ	Below 10	6	3	1	10
			60.0%	30.0%	10.0%	
		15 to 29	6	0	4	10
			60.0%	0%	40.0%	
		30 to 50	2	0	4	6
			33.3%	0%	66.7%	
		above 50	3	0	3	6
			50.0%	0%	50.0%	
Asante	praeɛ	Below 10	3	7		10
			30.0%	70.0%		
		15 to 29	10	0		10
			100.0%	0%		
		30 to 50	5	1		6
			83.30%	16.7%		
		above 50	5	1		6
			83.30%	16.7%		

Table 13: Interaction between age range and educated Fante speakers in the choice of variants

Dialect	Word		Variants			
			r	l	d	Total
Fante	awareɛ	below 10	4	6		10
			40.0%	60.0%		
		15 to 29	9	1		10
			90.0%	10.0%		
		30 to 50	5	1		6
			83.3%	16.7%		
		above 50	5	1		6
			83.3%	16.7%		
Fante	afɔreɛ	Below 10	5	5		10
			50.0%	50.0%		
		15 to 29	10	0		10
			100.0%	0%		
		30 to 50	5	1		6
			83.3%	16.7%		
		above 50	6	0		6
			100.0%	0%		
Fante	praeɛ	Below 10	6	4		10
			60.0%	40.0%		
		15 to 29	10	0		10
			100.0%	0%		
		30 to 50	5	1		6
			83.30%	16.7%		
		above 50	5	1		6
			83.3%	16.7%		

Table 14: Interaction between age range and uneducated Asante speakers in the choice of variants.

Dialect	word		Variants			Total
			r	l	d	
Asante	awareɛ	15 to 29	3	5	0	8
			37.5%	62.5%	0%	
		30 to 50	3	4	3	10
			30.0%	40.0%	30.0%	
		above 50	3	5	2	10
			30.0%	50.0%	20.0%	
Asante	afɔreɛ	15 to 29	4	2	2	8
			50.0%	25.0%	25.0%	
		30 to 50	2	2	6	10
			20.0%	20.0%	60.0%	
		above 50	2	1	7	10
			20.0%	10.0%	70.0%	
Asante	praeɛ	15 to 29	1	7		8
			12.5%	87.5%		
		30 to 50	5	5		10
			50.0%	50.0%		
		above 50	5	5		10
			50.0%	50.0%		

Table 15: Interaction between age range and uneducated Fante speakers in the choice of the variant in the words.

Dialect	word		Variants r	l	d	Total
Fante	awareɛ	15 to 29	3	5		8
			37.5%	62.5%		
		30 to 50	5	5		10
			50.0%	50.0%		
		above 50	3	7		10
			30.0%	70.0%		
Fante	afɔreɛ	15 to 29	4	4		8
			50.0%	50.0%		
		30 to 50	6	3	1	10
			60.0%	30.0%	10.0%	
		above 50	7	3		10
			70.0%	30.0%		
Fante	praeɛ	15 to 29	3	5		8
			37.5%	62.5%		
		30 to 50	3	7		10
			30.0%	70.0%		
		above 50	2	8		10
			20.0%	80.0%		

5.0 Conclusion

This paper investigated the distribution of the sounds [r], [l] and [d] in intervocalic position and [r] and [l] at the second consonant position of a CCV syllable structure in Akan words. Hitherto, any references to /r/ /l/ and /d/ alternation were firmly associated to free variation without consideration of the social factors that may characterize their distribution. What is new is that we analyzed the alternation from a sociophonetic perspective and in that regard the study is significant in showing that some social factors are involved and that the alternation is hardly free.

The study has shown that Akan speakers are more likely to use the [r] variant than [l] and [d] in intervocalic position in three target words investigated (i.e., **awareɛ** 'marriage', **afɔreɛ** 'tithe' and **praeɛ** 'broom'). The study did not uncover any major dialectal difference in the alternation between [r] and [l] but finds that [d] is decidedly an Asante variant that competes with the other two sounds in the speech of adults. The data however shows that the social variables age, level of education, and gender do influence the choice of [r] versus [l] in both Asante and Fante. Young, educated speakers, especially female speakers, demonstrated a higher tendency of using the [r] variant, which seems to have emerged as the most prestigious of the three variants.

We do acknowledge that this first-of-kind sociophonetic analysis of the [r], [l] and [d] alternation in Akan on the basis of a few target words is not exhaustive and that a more expanded list of variables (target words) will deepen insight into this alternation.

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