CHAPTER 12

SOCIAL AND STYLISTIC VARIATIONS OF VARIABLE $(\tau \Sigma)$

12.1 INTRODUCTION

The phoneme $\langle \tau \Sigma \rangle$ is not a variable in Malay as in most dialects of Malay, the phoneme $\langle \tau \Sigma \rangle$ is always realised as alveo-palatal affricate [$\tau \Sigma$] whether is it in word-initial, word-medial or word-final positions. This including the standard Malay, where the phoneme $\langle \tau \Sigma \rangle$ has only one allophone the alveo-palatal affricate [$\tau \Sigma$] with the phonemic realisations as follows:

$$/ \tau \Sigma / : \rightarrow \begin{cases} [\tau \Sigma] / _ all environments \end{cases}$$

Examples:

cari	'find'	:	[τΣαρι]
curi	'steal'	:	[τΣυρι]
cuci	'wash'	:	[τΣυτΣι]
cacing	g 'worm'	:	[τΣατΣιΝ]

This study only investigates the phoneme $\langle \tau \Sigma \rangle$ in only two environments, namely in the word-initial and word-medial positions. Hence the sounds of phoneme $\langle \tau \Sigma \rangle$ of the two positions will be enclosed in parentheses and names as 'variable ($\tau \Sigma$)' instead of using the term 'phoneme $\langle \tau \Sigma \rangle$ '. This is mainly because the variable ($\tau \Sigma$) is not equivalent to the phoneme $\langle \tau \Sigma \rangle$ since it represents only the $\langle \tau \Sigma \rangle$ in the word-initial position such as *cari* 'find', *curi* 'steal' and *cuti* 'holiday' and word-medial position such as *cuci* 'wash' and *cacing* 'worm'. Variable ($\tau \Sigma$) does not represent the $\langle \tau \Sigma \rangle$ in the word-final position as $\tau\Sigma$ only occur in this position in loan words as *pic* 'peach' and *mac* 'March'. Hence, the discussion of this chapter is focused on the variable ($\tau\Sigma$), which represents the word-initial $\tau\Sigma$ and the word-medial $\tau\Sigma$. If references need to be made specified on either one, the term 'variable ($\tau\Sigma$) word-initial' and 'variable ($\tau\Sigma$) word-medial' will be used explicitly.

In SMD, the $(\tau\Sigma)$ is variable in the sense that most speakers sometimes pronounced $/\tau\Sigma/$ as alveo-palatal affricate $[\tau\Sigma]$ and other times as alveolar fricative [s] in the word-initial and word-medial positions. In other words, variable $(\tau\Sigma)$ is often alternating between $[\tau\Sigma]$ and [s]. Thus, the variable $(\tau\Sigma)$ has two variants, namely the alveo-palatal affricate $[\tau\Sigma]$ and the alveolar fricative $[\sigma]$. Here, the variable $(\tau\Sigma)$ and it variants can be written as follows:

$$(\tau\Sigma) = \text{word-initial} / \tau\Sigma / : \Rightarrow \begin{cases} (\tau\Sigma)-_1 = [\tau\Sigma] \\ \\ (\tau\Sigma)-_2 = [\sigma] \end{cases}$$

These symbols representing the first variant of the variable $(\tau\Sigma)$ is the alveo-palatal affricate $[\tau\Sigma]$ and the second variant of the variable $(\tau\Sigma)$ is the alveolar fricative $[\sigma]$. The standard variant is the $[\tau\Sigma]$ variant and the $[\sigma]$ variant is the non-standard. The variable $(\tau\Sigma)$ word-initial and word-medial are alternating in SMD as follows:

Examples:			
cari	'find'	:	[τΣαρι] ~ [σαρι]
curi	'steal'	:	[τΣυρι] ~ [συρι]
cuti	'holiday'	:	[τΣυτι] ~ [συτι]
сисі	'wash'	:	[τΣυτΣι] ~ [συσι]
cacing	g 'worm'	:	$[\tau \Sigma \alpha \tau \Sigma \iota N] \sim [\sigma \alpha \sigma \iota N]$

As the variable $(\tau\Sigma)$ is not a very common feature in SMD, therefore it is it is not found in some of the speech of the informants involved. In word-initial position, variable $(\tau\Sigma)$ is found in the speeches of all the 90 participants who were involved in WLS and RPS. This variable is absent in 11 informants involved in FS and 5 informants involved in CS. Thus, this variable is only presented in the speech of 97 informants in FS and 103 informants in CS. For word-medial position, variable $(\tau\Sigma)$ is found in the speech of all the 90 participants who were involved in WLS and RPS. It is also found in the speech of all the 108 informants involved in CS, and only 100 informants involved in FS.

Based on Table 12.1, in the word-initial position, the variable $(\tau\Sigma)$ is variably realised either as the $[t\Sigma]$ variant and the $[\sigma]$ variant. The respective percentage mean of Variable $(t\Sigma)$ realised and $[t\Sigma]$ and [s] are 99.67 and 0.33% in WLS; 99.39 and 0.61% in RPS; 94.96 and 5.04% in FS; and 94.33 and 5.67% in CS. This shows that the word-initial $/t\Sigma/$ is realised high as $[t\Sigma]$ (94.33-99.67%) and low as [s] (0.33-5.67%).

	•					
Stylistic Variation	Variant	Ν	Min	Max	Mean	Std. Deviation
WLS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	90	70	100.00	99.67	3.16
	$(\tau\Sigma)$ -2 = [s]	90	0	30.00	0.33	3.16
RPS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	90	54.55	100.00	99.39	4.88
	$(\tau\Sigma)$ -2 = [s]	90	0	45.45	0.61	4.88
		Ta	ble 12.1, co	ont.		
Stylistic Variation	Variant	Ν	Min	Max	Mean	Std. Deviation
FS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	97	0	100.00	94.96	20.63
	$(\tau\Sigma)$ -2 = [s]	97	0	100.00	5.04	20.63
CS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	103	0	100.00	94.33	22.43
	$(\tau\Sigma)$ -2 = [8]	103	0	100.00	5.67	22.43

Table 12.1: Descriptive Statistics of Variation ($\tau\Sigma$) Word-Initial

As for word-medial position, Table 12.2 shows the respective percentage mean of variable ($\tau\Sigma$) realised as [$t\Sigma$] and [σ] are 99.63 and 0.37% in WLS; 99.44 and 0.56% in RPS; 95.08 and 4.92% in FS; 93.81 and 6.19% in CS. This shows that the word-medial / $t\Sigma$ / is realised high as [$t\Sigma$] (93.81-99.63%) and low as [s] (0.37-6.19%).

1 at	JIE 12.2 Desch	puve sta	usues of v	an attom $(\iota \Delta)$		ulai
Stylistic Variation	Variant	Ν	Min	Max	Mean	Std. Deviation
WLS	$(\tau \Sigma)$ - $_1 = [\tau \Sigma]$	90	66.67	100.00	99.63	3.51
	$(\tau\Sigma)-2=[s]$	90	0	33.33	0.37	3.51
RPS	$(\tau \Sigma)$ - $_1 = [\tau \Sigma]$	90	50	100.00	99.44	5.27
	$(\tau\Sigma)-2=[s]$	90	0	50.00	0.56	5.27
FS	$(\tau \Sigma)$ - $_1 = [\tau \Sigma]$	100	0	100.00	95.08	20.66
	$(\tau\Sigma)-2=[s]$	100	0	100.00	4.92	20.66
CS	$(\tau \Sigma)$ - $_1 = [\tau \Sigma]$	108	0	100.00	93.81	22.11
	$(\tau\Sigma)$ -2 = [s]	108	0	100.00	6.19	22.11

Table 12.2 Descriptive Statistics of Variation $(\tau \Sigma)$ Word-Medial

12.2 VARIABLE $(\tau \Sigma)$ AND GENDER

(a) WORD-INITIAL $/\tau\Sigma/$

The study shows that both gender groups use more of the $[\tau\Sigma]$ variant than the [s] variant in word-initial $/\tau\Sigma/$ for all four different stylistic variations as shown in Table 12.3.

Males on average use $[\tau\Sigma]$ between 95.65 and 100% in different stylistic variations. On the contrary, they use $[\sigma]$ between zero and 4.35%. Females use vo $\lambda\varepsilon\sigma\sigma$ $\tau\eta\alpha\nu$ 92.73% of $[\tau\Sigma] \alpha\nu\delta$ vo $\mu\rho\rho\varepsilon$ $\tau\eta\alpha\nu$ 7.27% of [s] in different stylistic variations.

Table 12.3: Percentage Means of Variable $(\tau\Sigma)$ Word-Initial
by Gender and Stylistic Variation

Stylistic Variation	Variant	Male	Female
WLS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	100.00	99.40
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	0.60

RPS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	99.77	99.09
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.23	0.91
FS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	97.87	92.73
	$(\tau\Sigma)$ -2 = $[\sigma]$	2.13	7.27
CS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	95.65	93.26
	$(\tau\Sigma)-2 = [\sigma]$	4.35	6.74

In word-initial position, males use a higher percentage of $[\tau\Sigma]$ and lower percentage of $[\sigma]$, while females use lower percentage of $[\tau\Sigma]$ and higher percentage of $[\sigma]$ in all the four stylistic variations

The indices for variable $(\tau \Sigma)$ by gender and stylistic variation lie between the scores of 100 and 107.27 as shown in Figure 12.1. These index scores of variable $(\tau \Sigma)$ word-initial are almost consistent with the use of the $(\tau \Sigma)$ -₁, which is the $[\tau \Sigma]$ variant.

The variable $(\tau\Sigma)$ is not subject to gender differentiation. Although the two gender lines are distinguished and not overlapping, the space separating the gender lines are narrow. Furthermore the percentage difference of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and [s] word-initially between two genders in different stylistic variations are insignificant at 5% level (*p*>0.05) as testified by the Independent-Samples T-Test (Appendix Ji).



Figure 12.1: Index Score of Variable $(\tau \Sigma)$ Word-Initial by Gender and Stylistic Variation

The variable $(\tau\Sigma)$ is also not subject to stylistic differentiation. Although the gender lines seem to rise in the less formal styles, the movement of the gender lines or percentage differences of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and [s] word-initially between one stylistic variation and another are too small and insignificant at 5% level (*p*>0.05) tested by the Paired-Samples T-Test (Appendix Jii).

As the variable $(\tau\Sigma)$ does not correlate with gender variation or stylistic variation in word-initial position, thus the variable $(\tau\Sigma)$ is neither a marker nor an indicator in the speech community of SMD. It has no consequential role in the marking of gender differences. There is no significant difference between the speech of males and females with regard to the use of variable $(\tau\Sigma)$ in word-initial position in SMD.

(b) WORD-MEDIAL $/\tau\Sigma/$

Table 12.4 shows the study finds that in word-medial position, both gender groups use more of the $[\tau\Sigma]$ variant than the [s] variant in all four different stylistic variations.

Stylistic Variation	Variant	Male	Female
WLS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	100.00	99.33
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	0.67
RPS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	100.00	99.00
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	1.00
FS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	97.30	93.46
	$(\tau\Sigma)$ -2 = $[\sigma]$	2.70	6.54
CS	$(\tau\Sigma)$ - $_1 = [\tau\Sigma]$	95.74	92.32
	$(\tau\Sigma)$ -2 = $[\sigma]$	4.26	7.68

Table 12.4: Percentage Means of Variable $(\tau \Sigma)$ Word-Medial by Gender and Stylistic Variation

Males use no less that 95.74% of $[\tau\Sigma]$ and no more that 4.26% of $[\sigma]$ in different stylistic variations. Females use 99.33% of $[\tau\Sigma]$ at the least and 7.68% of [s] at the most in different stylistic variations.

Like in word-initial position, males use a higher percentage of $[\tau\Sigma]$ and lower percentage of $[\sigma]$, while females use lower percentage of $[\tau\Sigma]$ and higher percentage of $[\sigma]$ in all the four stylistic variations.

The indices for variable $(\tau\Sigma)$ by gender and stylistic variation lie between the scores of 100 and 107.68 as shown in Figure 12.2. These index scores of variable $(\tau\Sigma)$ word-medial are almost consistent with the use of the $(\tau\Sigma)$ -1, which is the $[\tau\Sigma]$ variant.

In medial position, the variable $(\tau\Sigma)$ is not subject to gender differentiation. Although the two gender lines are distinguished and not overlapping, the space separating the gender lines is too narrow. Furthermore the percentage difference of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and [s] word-medially between two genders in different stylistic variations are insignificant at 5% level (*p*>0.05) as testified by the Independent-Samples T-Test (Appendix Jiii).



Figure 12.2: Index Score of Variable $(\tau \Sigma)$ Word-Medial by Gender and Stylistic Variation

Similarly, the variable $(\tau\Sigma)$ is not subject to stylistic differentiation. Although the gender lines rise in the less formal styles especially for males, the percentage differences of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and [s] word-medially from one stylistic variation to another are too small and insignificant at 5% level (*p*>0.05) tested by the Paired-Samples T-Test (Appendix Jiv).

As the variable $(\tau\Sigma)$ does not correlate with gender variation or stylistic variation in word-medial position, thus the variable $(\tau\Sigma)$ is neither a marker nor an indicator in the speech community of SMD. It has no consequential role in the marking of gender differences. Thus, there is no significant difference between the speech of males and females with regard to the use of variable $(\tau\Sigma)$ in word-medial position in SMD.

12.3 VARIABLE $(\tau \Sigma)$ AND AGE

(a) WORD-INITIAL $/\tau\Sigma/$

The study shows that in word-initial $\tau\Sigma$, all the age groups use a higher percentage of the [$\tau\Sigma$] variant as compared to the [s] variant in all stylistic variations. All age groups use [$\tau\Sigma$] between 75 and 100%, followed by [σ] between zero and 25% in different stylistic variations.

		3 8	5			
Stylistic Variation	Variant	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs
WLS	$(\tau\Sigma)$ -1 =	100.00	100.00	00.64	100.00	
	[τΣ]	100.00	100.00	98.64	100.00	•
	$(\tau\Sigma)$ -2 =	0.00	0.00	1.26	0.00	
	[σ]	0.00	0.00	1.50	0.00	•
RPS	$(\tau\Sigma)$ -1 =	100.00	100.00	07 03	07 73	
	[τΣ]	100.00	100.00)1.)5)1.15	•
	$(\tau \Sigma)_{-2} =$	0.00	0.00	2.07	2 27	
	[σ]	0.00	0.00	2.07	2.27	•
FS	$(\tau\Sigma)$ -1 =	00.07	100.00	100.00	72 21	75.00
	[τΣ]	99.07	100.00	100.00	73.21	73.00
	$(\tau\Sigma)$ -2 =	0.03	0.00	0.00	26 70	25.00
	[σ]	0.95	0.00	0.00	20.79	25.00
CS	$(\tau\Sigma)$ -1 =	06 67	100.00	06.88	80.05	76 30
	[τΣ]	20.07	100.00	70.00	00.95	70.39
	$(\tau\Sigma)$ -2 =	2 22	0.00	2 1 2	10.05	22.61
	[σ]	3.33	0.00	5.15	19.05	23.01

Table 12.5: Percentage Means of Variable $(\tau \Sigma)$ Word-Initial by Age and Stylistic Variation

On average, the age group of 15 - 24 year olds uses no less than 96.67% of $[\tau\Sigma]$, and no more than 3.33% of $[\sigma]$, in the different stylistic variations. The 25-34 year olds age group uses 100% of $[\tau\Sigma]$ and none of $[\sigma]$ in all four stylistic variations. The age group of 35-44 year olds uses the highest percentage of $[\sigma]$ and the lowest percentage of $[\tau\Sigma]$ among all the age groups in WLS. The age group of 45-54 year olds uses the highest percentage of $[\tau\Sigma]$ among all the age groups in RPS and FS. The oldest age group of 55-64 year olds uses the highest percentage of $[\sigma]$ and the lowest percentage of $[\tau\Sigma]$ among all the age groups in RPS and FS. The oldest age group of 55-64 year olds uses the highest percentage of $[\sigma]$ and the lowest percentage of $[\tau\Sigma]$ among all the age groups in CS.

The indices for variable $(\tau\Sigma)$ by age and stylistic variation lie between the scores of 100 and 126.79. These index scores of variable $(\tau\Sigma)$ in word-initial position are almost consistent with the use of the $(\tau\Sigma)$ -₁, which is the $[\tau\Sigma]$ variant for the younger age groups; but move towards the use of the $(\tau\Sigma)$ -₂, which is the $[\sigma]$ variant for the older age groups.

The variable $(\tau\Sigma)$ is subject to age differentiation. Although there is not clear line distinction in WLS and RPS made by the different age groups, there is a wide space separating the two older age groups with the younger age groups in FS and CS. This is also supported by the significant percentage differences at 5% level (p<0.05) of variable ($\tau\Sigma$) realised as [$\tau\Sigma$] and [s] word-initially between age groups of 15-44 and 45-64 year olds in FS and CS as tested by One-Way ANOVA Test (Appendix Jv).



Figure 12.3: Index Score of Variable ($\tau\Sigma$) Word-Initial by Age and Stylistic Variation

These indices show that the variable $(\tau\Sigma)$ is also not subject to stylistic differentiation. Besides the age line of 15-24 year olds which rise in the less formal

styles, the other age lines are moving up and down. This is further supported by the insignificant percentage differences at 5% level (p>0.05) of variable ($\tau\Sigma$) realised as [$\tau\Sigma$] and [s] word-initially between one stylistic variation and another by different age groups as tested by the Paired-Samples T-Test (Appendix Jvi).

This concludes that the variable $(\tau\Sigma)$ is correlated with age variation but not stylistic variation in word-initial position. Thus, the variable $(\tau\Sigma)$ is an indicator in the speech community of SMD as it has some consequential role in the marking of age differences between the younger and the older age groups in FS and CS. However, it has not consequential role in the marking of age differences in WLS and RPS or within the younger or the older age groups.

(b) WORD-MEDIAL $/\tau\Sigma/$

The study finds that in word-medial position, all the age groups use a higher percentage of the $[\tau\Sigma]$ variant as compared to the [s] variant in all stylistic variations. All age groups use $[\tau\Sigma]$ between 62.92 and 100%, followed by [s] between zero and 37.08% in different stylistic variations.

by Age and Stylistic Variation									
Stylistic Variation	Variant	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs			
WLS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	100.00	100.00	98.49	100.00				
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	0.00	1.52	0.00				
RPS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	100.00	100.00	97.73	100.00				
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	0.00	2.27	0.00				
		Τa	able 12.6, co	ont.					
Stylistic Variation	Variant	15-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs			
FS	$(\tau\Sigma)1 = [\tau\Sigma]$	100.00	100.00	99.30	87.50	62.92			

Table 12.6: Percentage Means of Variable $(\tau \Sigma)$ Word-Medial by Age and Stylistic Variation

	$(\tau\Sigma)-2 = [\sigma]$	0.00	0.00	0.70	12.50	37.08
CS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	96.77	100.00	97.44	80.00	73.94
	$(\tau\Sigma)$ -2 = $[\sigma]$	3.23	0.00	2.56	20.00	26.06

The age group of 35-44 year olds uses the highest percentage of $[\sigma]$ and the lowest percentage of $[\tau\Sigma]$ among all the age groups in the case of WLS and RPS. This oldest age group of 55-64 years uses the highest percentage of $[\sigma]$ and the lowest percentage of $[\tau\Sigma]$ among all the age groups in FS and CS. The indices for variable $(\tau\Sigma)$ by age and stylistic variation lie between the scores of 100 and 137.08 as shown in Figure 12.4. These index scores of variable $(\tau\Sigma)$ in word-medial position are almost consistent with the use of the $(\tau\Sigma)$ -1, which is the $[\tau\Sigma]$ variant for the younger age groups; and move towards the use of the $(\tau\Sigma)$ -2, which is the $[\sigma]$ variant for the two older age groups.



Figure 12.4: Index Score of Variable (τΣ) Word-Medial by Age and Stylistic Variation Similarly, the variable (τΣ) word-medial is subject to age differentiation.
Although there is not clear line distinction in WLS and RPS made by the different age groups, there is a wide space separating the two older age groups with the younger age

groups in FS and CS. These index scores show that the variable $(\tau\Sigma)$ is correlated with age variation to some extend in the less formal styles. This is also supported by the significant percentage differences at 5% level (*p*>0.05) of variable ($\tau\Sigma$) realised as [$\tau\Sigma$] and [s] word-medially between age groups in FS and CS as tested by One-Way ANOVA Test (Appendix Jvii).

However, the indices show that the variable $(\tau\Sigma)$ is not subject to the stylistic differentiation. All the age lines are either static or moving up and down instead of rising in the less formal styles. This is further supported by the insignificant percentage differences at 5% level (p>0.05) of variable ($\tau\Sigma$) realised as [$\tau\Sigma$] and [s] word-medially between one stylistic variation and another by different age groups as tested by the Paired-Samples T-Test (Appendix Jviii).

In sum, the variable $(\tau\Sigma)$ is correlated with age variation but not stylistic variation in word-medial position. Thus the variable $(\tau\Sigma)$ is an indicator in the speech community of SMD. It has some consequential role in the marking of age differences between the younger and the older age groups in FS and CS. However, it has not consequential role in the marking of age differences in WLS and RPS or within the younger or the older age groups.

12.4 VARIABLE $(\tau \Sigma)$ AND ETHNIC MEMBERSHIP

(a) WORD-INITIAL $/\tau\Sigma/$

The study finds that in word-initial position, the variable $(\tau \Sigma)$ is realised higher as the $[\tau \Sigma]$ than [s] in all stylistic variations by all ethnic groups. All ethnic groups use $[\tau \Sigma]$

between 90.63 and 100%, followed by [s] between zero and 9.38% in different stylistic variations.

MLY and BMP use $[\tau\Sigma]$ 100% and zero% of [s] in all four stylistic variations, and BGS and BMP in WLS, RPS and CS. KDZ uses the highest percentage of [σ] and the lowest percentage of $[\tau\Sigma]$ among all ethnic groups in the case of WLS, RPS and CS, while BMP in FS.

	Uy L		moersm	p and St	ynstie va	anation		
Stylistic Variation	Variant	MLY	KDZ	BJU	BGS	BMP	CHI	ONB
WLS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	100.00	99.03	100.00	100.00	100.00	100.00	
	$(\tau\Sigma)-2 = [\sigma]$	0.00	0.97	0.00	0.00	0.00	0.00	
RPS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	100.00	98.24	100.00	100.00	100.00	100.00	•
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	1.76	0.00	0.00	0.00	0.00	
FS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	100.00	91.41	94.12	98.41	80.00	100.00	100.00
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	8.59	5.88	1.59	20.00	0.00	0.00
CS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	100.00	90.63	91.23	100.00	100.00	98.61	91.94
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	9.38	8.77	0.00	0.00	1.39	8.06

Table 12.7: Percentage Means of Variable $(\tau \Sigma)$ Word-Initial by Ethnic Membership and Stylistic Variation

The indices for variable $(\tau\Sigma)$ by ethnic membership and stylistic variation lie between the scores of 100 and 109.38 as shown in Figure 12.5. These index scores of variable $(\tau\Sigma)$ word-initial are almost consistent with the use of the $(\tau\Sigma)$ -₁, which is the $[\tau\Sigma]$ variant.

The variable $(\tau \Sigma)$ is not subject to ethnic group differentiation. There is not much distinction of ethnic lines in WLS and RPS. These lines are overlapping and cross each other in FS and CS. Furthermore, the percentage differences of variable $(\tau \Sigma)$ realised as $[\tau \Sigma]$ and [s] word-initially between ethnic groups in different stylistic variations are insignificant at 5% level (p>0.05) as tested by One-Way ANOVA Test (Appendix Jix).

These indices show that the variable $(\tau\Sigma)$ is not subject to stylistic differentiation. All the ethnic lines are either static or moving up and down instead of rising in the less formal styles, except for KDZ and ONB. This is further supported by the insignificant percentage differences at 5% level (*p*>0.05) of variable ($\tau\Sigma$) realised as [$\tau\Sigma$] and [s] word-initially by different ethnic groups between one stylistic variation and another as tested by the Paired-Samples T-Test (Appendix Jx).



Figure 12.5: Index Score of Variable $(\tau\Sigma)$ Word-Initial by Ethnic Membership and Stylistic Variation

As the variable $(\tau\Sigma)$ does not correlate with ethnic group variation or stylistic variation in word-initial position, thus the variable $(\tau\Sigma)$ is neither a marker nor an indicator in the speech community of SMD. It has no consequential role in the marking of ethnic differences, as all ethnic groups do not make significant differences in the use of variable $(\tau\Sigma)$ word-initial in SMD.

(b) WORD-MEDIAL $/\tau\Sigma/$

In word-medial position, variable $(\tau\Sigma)$ is realised more as the $[\tau\Sigma]$ variant as than the [s] variant by all ethnic groups in all stylistic variations. All age ethnic groups use $[\tau\Sigma]$ between 90.03 and 100%, followed by [s] between zero and 9.97% in different stylistic variations.

	- 5 -			-p				
Stylisti Variatio	c Variant on	MLY	KDZ	BJU	BGS	BMP	СНІ	ONB
WLS	$(\tau\Sigma)$ -1 = $[\tau\Sigma]$	100.00	98.92	100.00	100.00	100.00	100.00	•
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	1.08	0.00	0.00	0.00	0.00	
RPS	$(\tau\Sigma)$ -1 = $[\tau\Sigma]$	100.00	98.39	100.00	100.00	100.00	100.00	
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.00	1.61	0.00	0.00	0.00	0.00	
FS	$(\tau \Sigma)$ -1 = $[\tau \Sigma]$	99.70	90.03	95.00	100.00	100.00	92.59	98.96
	$(\tau\Sigma)$ -2 = $[\sigma]$	0.30	9.97	5.00	0.00	0.00	7.41	1.04
CS	$(\tau\Sigma)$ -1 = $[\tau\Sigma]$	100.00	90.03	92.06	100.00	100.00	95.56	90.53
	$(\tau\Sigma)-2 = [\sigma]$	0.00	9.97	7.94	0.00	0.00	4.44	9.47

Table 12.8: Percentage Means of Variable $(\tau \Sigma)$ Word-Medial by Ethnic Membership and Stylistic Variation

MLY, BGS and BMP use $[\tau\Sigma]$ 100% and zero% of [s] in all four stylistic variations, and CHN in WLS and RPS. While, KDZ uses the highest percentage of $[\sigma]$ and the lowest percentage of $[\tau\Sigma]$ among all ethnic groups in all stylistic variation.

The indices for variable $(\tau\Sigma)$ by ethnic membership and stylistic variation lie between the scores of 100 and 109.97 as shown in Figure 12.6. These index scores of variable $(\tau\Sigma)$ in word-medial position are almost consistent with the use of the $(\tau\Sigma)_{-1}$, which is the $[\tau\Sigma]$ variant.

The variable $(\tau \Sigma)$ is not subject to ethnic group differentiation. Ethnic lines are overlapping and the space separating the ethnic lines is narrow in WLS and RPS.

Furthermore the percentage difference of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and [s] wordmedially between ethnic groups in different stylistic variations are insignificant at 5% level (*p*>0.05) as clarified in One-Way ANOVA Test (Appendix Jxi).



Figure 12.6: Index of Variable $(\tau \Sigma)$ Word-Medial by Ethnic Membership and Stylistic Variation

Generally these indices show that the variable $(\tau\Sigma)$ is also not subject to the stylistic differentiation. The ethnic lines are not rise in the less formal styles and percentage differences of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and [s] word-medially between one stylistic variation and another are too small and insignificant at 5% level (*p*>0.05) as indicated by the Paired-Samples T-Test (Appendix Jxii).

As the variable $(\tau \Sigma)$ does not correlate with ethnic group variation or stylistic variation in word-medial position, thus the variable $(\tau \Sigma)$ is neither a marker nor an indicator in the speech community of SMD. It has no consequential role in the marking of ethnic differences. There is no significant difference between the speech of different ethnic groups with regard to the use of variable ($\tau\Sigma$) word-medial in SMD.

12.5 VARIABLE $(\tau \Sigma)$ AND SOCIAL STRATIFICATION

(a) WORD-INITIAL $/\tau\Sigma/$

This study shows that in word-initial position, variable $(\tau \Sigma)$ is realised higher amount as $[\tau \Sigma]$ than [s] by all social strata in all stylistic variations. All social strata use $[\tau \Sigma]$ between 72.79 and 100%, followed by [s] between zero and 27.21% in different stylistic variations.

Stylistic Variation	Variant	LWC	MWC	UWC	LMC	MMC	
WLS	$(\tau\Sigma)-1 = [\tau\Sigma]$	95.00	100.00	100.00	100.00	100.00	
	(τΣ)- ₂ = [σ]	5.00	0.00	0.00	0.00	0.00	
RPS	$(\tau\Sigma)-1 = [\tau\Sigma]$	92.43	99.65	100.00	100.00	100.00	
	(τΣ)- ₂ = [σ]	7.58	0.35	0.00	0.00	0.00	
FS	$(\tau\Sigma)-1 = [\tau\Sigma]$	77.89	100.00	98.68	100.00	100.00	
	(τΣ)- ₂ = [σ]	22.11	0.00	1.32	0.00	0.00	
CS	$(\tau\Sigma)-1 = [\tau\Sigma]$	72.79	99.52	100.00	100.00	100.00	
	$(\tau\Sigma)-2 = [\sigma]$	27.21	0.48	0.00	0.00	0.00	

Table 12.9: Percentage Means of Variable $(\tau \Sigma)$ Word-Initial by Social Stratification and Stylistic Variation

The LWC uses the highest percentage of $[\sigma]$ and the lowest percentage of $[\tau\Sigma]$ among all social strata in all four stylistic variations. Other social strata use $[\tau\Sigma]$ at or almost 100% and [s] at or almost zero%.

The indices for variable $(\tau\Sigma)$ by social stratification and stylistic variation lie between the scores of 100 and 127.21 as shown in Figure 12.7. These index scores of variable $(\tau\Sigma)$ in word-initial position are almost consistent with the use of the $(\tau\Sigma)$ -₁, which is the $[\tau\Sigma]$ variant.



Figure 12.7: Index Score of Variable ($\tau\Sigma$) Word-Initial by Social Stratification and Stylistic Variation

The variable $(\tau\Sigma)$ has minimal correlation with social stratification, as shown by the space separating the social strata lines especially for LWC. This is proven by the significant percentage differences at 5% level (p>0.05) of variable ($\tau\Sigma$) realised as [$\tau\Sigma$] and [s] word-initially between LWC and other social strata in all stylistic variations of WLS, RPS, FS and CS as tested by One-Way ANOVA Test (Appendix Jxiii).

However, the variable $(\tau \Sigma)$ has not correlation with stylistic variation. Besides the line of LWC rise in the less formal style, the other social strata are not. This is also proven by the insignificant percentage differences at 5% level (*p*>0.05) of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and $[\sigma]$ word-initially by social stratification between one stylistic variation and another as tested by the Paired-Samples T-Test (Appendix Jix).

The variable $(\tau\Sigma)$ is correlated with social strata variation but not stylistic variation in word-initial position. Thus the variable $(\tau\Sigma)$ is an indicator in the speech community of SMD. It has little consequential role in the marking social strata differences especially the LWC from the other social strata. However, among other social strata, they do not make any significant difference in the use of variable $(\tau\Sigma)$ word-initial in SMD.

(b) WORD-MEDIAL $/\tau\Sigma/$

Similarly, in word-medial position variable $(\tau \Sigma)$ is realised more as $[\tau \Sigma]$ and less as [s] by all social stratifications use in all stylistic variations. All social strata use $[\tau \Sigma]$ between 73.81 and 100%, followed by [s] between zero and 26.19% in different stylistic variations.

Stylistic Variation	Variant	LWC	MWC	UWC	LMC	MMC
WLS RPS	$(\tau\Sigma)$ -1 = $[\tau\Sigma]$	94.45	100.00	100.00	100.00	100.00
	(τΣ)- ₂ = [σ]	5.56	0.00	0.00	0.00	0.00
	$(\tau\Sigma)$ -1 = $[\tau\Sigma]$	91.67	100.00	100.00	100.00	100.00
	(τΣ)- ₂ = [σ]	8.33	0.00	0.00	0.00	0.00

Table 12.10: Percentage Means of Variable $(\tau \Sigma)$ Word-Medial by Social Stratification and Stylistic Variation

Table 12.10, cont.

Stylistic Variation	Variant	LWC	MWC	UWC	LMC	MMC
FS	$(\tau\Sigma)$ -1 = $[\tau\Sigma]$	79.38	99.64	96.46	100.00	100.00
	$(\tau\Sigma)$ -2 =	20.63	0.36	3.54	0.00	0.00

CS	$ \begin{matrix} [\sigma] \\ (\tau \Sigma)1 = \\ [\tau \Sigma] \end{matrix} $	73.81	100.00	98.00	100.00	100.00
	$(\tau\Sigma)-2 = [\sigma]$	26.19	0.00	2.00	0.00	0.00

The LWC uses the high percentage of $[\sigma]$ and the low percentage of $[\tau\Sigma]$ among all social strata in all four stylistic variations. Other social strata use $[\tau\Sigma]$ at or almost 100% and [s] at or almost zero%.

The indices for variable $(\tau \Sigma)$ by social stratification and stylistic variation lie between the scores of 100 and 126.19 as shown in Figure 12.8. These index scores of variable $(\tau \Sigma)$ in word-initial position are also almost consistent with the use of the $(\tau \Sigma)_{-1}$, which is the $[\tau \Sigma]$ variant.

The variable $(\tau\Sigma)$ word-medial has minimal correlation with social stratification, as shown by the space separating the social strata lines especially for LWC from other social strata. This is proven by the significant percentage differences at 5% level (*p*>0.05) of variable ($\tau\Sigma$) realised as [$\tau\Sigma$] and [s] word-medially between LWC and other social strata in all stylistic variations of WLS, RPS, FS and CS as tested by One-Way ANOVA Test (Appendix Jxv).

The variable $(\tau\Sigma)$ has minimal correlation with social stratification. Besides the line of LWC rise in the less formal style, the other social stratifications are not. This is also proven by the insignificant percentage differences at 5% level (*p*>0.05) of variable $(\tau\Sigma)$ realised as $[\tau\Sigma]$ and $[\sigma]$ word-initially by social stratification between one stylistic variation and another as tested by the Paired-Samples T-Test (Appendix Jxvi).



Figure 12.8: Index Score of Variable $(\tau \Sigma)$ Word-Medial by Social Stratification and Stylistic Variation

The variable $(\tau\Sigma)$ is correlated with social strata variation but not stylistic variation in word-medial position. Thus the variable $(\tau\Sigma)$ is an indicator in the speech community of SMD. It has some consequential role in the marking of social stratification especially LWC from the other social strata. However, there is no significant difference in the use of variable (\leftrightarrow) in word-initial position among other social strata in SMD.

12.6 CONCLUSION

In conclusion, all the informants use enormous amount of the $[\tau\Sigma]$ variant and less amount the $[\sigma]$ variant in SMD. The variable $(\tau\Sigma)$ is realised as the $[\tau\Sigma]$ variant ranging from zero to 100% and the $[\sigma]$ variant ranging from zero to 100% word-initial; and the $[\tau\Sigma]$ variant ranging from zero to 100% and the $[\sigma]$ variant ranging from zero to 100% word-medial. The indices for the variable $(\tau\Sigma)$ are ranging between the score of 100 to 127.21 word-initial and 100 to 137.08 word-medial, which are both almost consistent with of the $[\tau\Sigma]$ variant. In most cases, the speech community of SMD would use $[\tau\Sigma\upsilon\tau\iota]$ 'holiday' as $[\tau\Sigma\upsilon\tau\iota]$ and $[\tau\Sigma\upsilon\tau\Sigma\iota]$ ' $\omega\alpha\sigma\eta \ni \alpha\sigma [\tau\Sigma\upsilon\tau\Sigma\iota]$. However, as the variable $(\tau\Sigma)$ is correlated with age variation, especially in distinguishing the older from the younger age groups; and social stratification, especially in distinguishing the lowest social stratification from the other higher social stratifications. The variable $(\tau\Sigma)$ does not correlate with gender and ethnic group variations. The old age groups of 45-54 and 55-64 year olds and the social stratum of LWC have the tendency to pronounce these words as $[\sigma\upsilon\tau\iota]$ and $[\sigma\upsilon\sigma\iota]$ instead, especially in the less formal styles of FS and CS.

There is not significant correlation between stylistic variation and all four social variations of gender, age, ethnic group and social strata for variable $(\tau\Sigma)$ word-initial and word-medial. However, in general, the more formal a speech style, more of the $[\tau\Sigma]$ variant is being used, conversely, the less formal a speech style, the more of the [s] variant is being used.