

ABSTRACT

STRESSLESS HEAVY SYLLABLES AFFECT MAIN STRESS PERCEPTION OF SAUDI LEARNERS OF ENGLISH

This study inspects whether stressless heavy syllables in English words affect main (primary) stress perception of Adult Saudi learners of English. With the use of 48 two-, three-, and four-syllable nonce words that correspond to the phonotactics of English and have only one heavy syllable and one stressed light syllable in each word, 10 participants listen to a recording of a native English speaker producing these words and match each word they hear to one of multiple written forms that match the heard word and differ only in having each syllable written in capitals and bolds at a time. The results show that stressless heavy syllables in English words affect main stress perception of Saudi learners of English when stress falls on light syllables in reality.

Majed Abdullah Alzhrani
May 2013

STRESSLESS HEAVY SYLLABLES AFFECT MAIN STRESS
PERCEPTION OF SAUDI LEARNERS OF ENGLISH

by

Majed Abdullah Alzhrani

A thesis

submitted in partial

fulfillment of the requirements for the degree of

Master of Arts in Linguistics

in the College of Arts and Humanities

California State University, Fresno

May 2013

APPROVED

For the Department of Linguistics:

We, the undersigned, certify that the thesis of the following student meets the required standards of scholarship, format, and style of the university and the student's graduate degree program for the awarding of the master's degree.

Majed Abdullah Alzhrani
Thesis Author

Chris Golston (Chair) Linguistics

Sean Fulop Linguistics

Brian Agbayani Linguistics

For the University Graduate Committee:

Dean, Division of Graduate Studies

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ACKNOWLEDGMENTS

I would love to thank my thesis committee members at the linguistics department at California State University Fresno, my family, Ahmed, Mohammed, and participants in this study for helping me get this thesis done.

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CHAPTER 1: INTRODUCTION

Saudi Learners of English and Stress Perception

Saudi students at late elementary, intermediate, high schools and at university in Saudi Arabia mandatorily learn English as a foreign language. One of the problems they have to deal with when acquiring English is stress perception and production. Studies like Anani (1989), Youssef and Mazurkewich (1998), and Altmann (2006) show that Arabic-speaking learners of English have problems perceiving and producing English stress.

Altmann (2006) shows that Arabic-speaking learners of English display effects of first language (L1) Arabic stress on second language (L2) English stress acquisition. She states that stress perception of Arabic speakers is the worst among many speakers of stress languages and that this might be due to quantity sensitivity and predictability of stress in Arabic. She suggests that further research is needed. Youssef and Mazurkewich (1998) show that Cairene Arabic speakers' perception of English stress is affected by stress rules of their Arabic. The current study researches stressless heavy syllables effect on acquisition of stress on light syllables ('stress' always refers to main stress). In other words, this study inspects whether stressless heavy syllables in English words attract stress in the perception of Arabic-speaking Saudi learners of English. The study uses multiple-syllable words where stressless heavy syllables appear in every possible position so to assess whether they create a perception of stress.

There are many different Arabic dialects spoken in Saudi Arabia. The participants used for this study speak one dialect and they all come from Alatawlah village in Albaha city that is located in the southwestern region of Saudi Arabia (Figure 1).



Figure 1. Albaha City, where Alatawlah Village is located north, in red.¹

Stress in the Alatawlah dialect is sensitive to quantity. That is, a heavy syllable attracts stress in this dialect. Final syllable codas in words are extrametrical in Alatawlah, e.g. [ˈsa.maʕt] ‘I heard’.

To test whether stressless heavies affect stress perception in this study, nonce words that correspond to English phonotactics are used. Participants were chosen based on how bad their English was in order to maximize the effect of L1 on L2 and to minimize the risk of having participants who perceive English words well.

¹ http://en.wikipedia.org/wiki/File:Al_Bahah_in_Saudi_Arabia.svg

The Hypothesis

Since stressless heavy syllables attract stress in Alatawlah Arabic, the hypothesis is that heavy syllables that bear no main stress in English words will nevertheless attract the perception of stress in Saudi learners of English. The expectation is that when an English word has a stressless heavy syllable in it and main stress falls on some other light syllable in that word, Saudi learners of English will often perceive a stressless heavy syllable as stressed while the light syllable that is actually stressed will consequently be perceived as stressless.

Study Significance

The results of this study show that stressless heavy syllables affect stress perception of Saudi learners of English. This leads to two significant points. First, the results of this study may help Arabic-speaking learners of English figure out one of the problematic effects of L1 that prevents them from perceiving stress in English words correctly and it may also help teachers of English in Arabic-speaking countries to predict already some of the pronunciation problems that Arabic-speaking learners of English will have when learning new English words. Harris (1954) proposed that studying the effect of L1 on L2 acquisition may lead to better learn or teach L2. Archibald (1993) doubted that teaching the learner that their L1's stress is quantity sensitive would have any affect on their performance. Second, this study supports the idea of stress transfer, where Arabic's sensitivity to syllable quantity (see Dresher & Kaye 1990 for parameter settings) guides English stress perception (Youssef & Mazurkewich 1998). Youssef & Mazurkewich show that stressed final superheavy syllables and stressed heavy penults in English words are correctly perceived as stressed by advanced Cairene Arabic-speaking learners of English. Archibald (1993) shows that this is also the case with

Hungarian speakers learning English where the L1's quantity sensitivity leads Hungarian speakers to perceive stress on stressed heavy syllables correctly.

Structure of the Thesis

The rest of the thesis is laid out as follows. The next chapter shows quantity sensitivity of the Arabic dialect under investigation, reviews stress perception studies of Arabic speakers learning English and shows that no study has ever checked the influence of stressless heavy syllables on stress perception of Arabic speakers. Chapter 3 is about what kinds of stimuli and participants are used to collect data and how the stimuli and participants are used to collect data. Chapter 4 discusses the results of the stress perception test showing that stress perception of Saudi learners of English is affected by stressless heavy syllables in English words. Chapter 5 ends the thesis by stating the outcome of the study and by suggesting avenues for further research.

CHAPTER 2: LITERATURE REVIEW

Introduction

Heavy syllables attract stress in Arabic and English. The current study examines whether stressless heavy syllables affect Arabic speakers' stress perception in English words, so this chapter will explore quantity sensitivity and the stress rules of Alatawlah Arabic and give examples for those rules. Also, it looks at previous studies of stress transfer from Arabic to English in adult second language acquisition.

Quantity-Sensitivity

Arabic Stress

Arabic is a quantity-sensitive language where heavy syllables attract stress (e.g., Mitchell, 1960; Halle & Vergnaud, 1987 for Cairene Arabic; Langendoen, 1968; McCarthy, 1979 for Classical Arabic; Watson, 2007 for San'ani and Cairene Arabic; Shifflett, 2011 for Tunisian Arabic; Alrajeh, 2011 for Modern Standard Arabic). Heavy syllables also attract stress in Alatawlah Arabic. However, stress commonly falls on light syllables as well. Following are the stress rules for Alatawlah Arabic.

- (1) Stress the ultimate syllable if it has a heavy vowel. Final syllable codas are extrametrical, e.g. [wa.'rai] 'behind me', [ʃar.'rai] 'buyer', [ma.sa:.fa.'ri:n] 'they are travelling/travellers', [bat.sa:.fa.'ru:n] 'you will travel', [da.'ma:r] 'destruction', [ħu.'sem] a male's name', and [ʔa.'zaib] 'wonders';
- (2) otherwise, stress the penultimate if heavy, e.g. [sʕa:.'faħ.tak] 'I shook your hand', [ʔas.'tar.zalt] 'I became a man', [ʔal.mas.ta.'ħi:.jah] 'the shy',

[sa.'far.kum] 'your travel', [maf.'ru:.bak] 'your drink' and [ha.'bi:.bak] 'your lover';

(3) otherwise, stress the light penultimate or the heavy antepenultimate, e.g. [mus^s.'ta.fa] 'chosen', [fa:.'ra.kak] 'he shared with you', ['fa:.ra.bah] 'drunk', [sa.'far.za.lah] 'quince', [mat.'war. ra.t^hah] 'a female in trouble', [ma.'sa:.fa.ran] 'he travelled/ he is travelling' and [faʒ.'za.rah] 'he hurt him';

(4) otherwise, stress the penultimate if penultimate and antepenultimate are both lights, e.g. [man.ka.'sa.rah] 'broken', [θ^sa.'ra.bak] 'he hit you', [ha.'fa.rah] 'an insect' and [ba.'qa.rah] 'a cow'.

Arabic to English Stress Transfer

Arabic speakers' stress is sensitive to heavy syllables in Arabic. This makes it likely that Arabic-speaking learners of English might have trouble perceiving stress that fall on a light syllable in an English word when there is a heavy around. Altmann (2006) shows that Arabic speakers have great difficulty perceiving stress in English. They even have greater difficulty than French and Turkish speakers, who also have predictable stress like Arabic speakers, because Arabic is quantity-sensitive.

Youssef and Mazurkewich (1998) show that Cairene Arabic stress affects Cairene speakers' perception of stress in English words. They show that Cairene speakers perceive stress correctly when it falls on a stressed final superheavy or a stressed penultimate heavy. In other words, they show that when test words' stress resembles that of Cairene Arabic, Cairene speakers perceive it well but when test words' stress does not resemble that of Cairene, participants tend to misperceive it.

This clearly indicates that this is a stress transfer effect that comes from speakers' L1, Arabic.

Heavy Syllables and Stress Perception

There are some perception studies that investigate the effect of Arabic stress on the acquisition of English stress but no study has ever investigated or looked at whether stressless heavy syllables affect stress perception of Arabic-speaking learners of English. Altmann (2006) examines stress perception and production of Arabic, Chinese, French, Japanese, Korean, Spanish, and Turkish speakers in light of Stress Typology Model and Stress Deafness Model but never looks at the effect of stressless heavy syllables on stress perception of Arabic-speaking learners of English. Youssef and Mazurkewich (1998) examine Cairene Arabic speakers' stress perception and production and argue that a second language learner may access universal grammar principles and reset parameters. They do not inspect whether stressless heavy syllables in English words affect stress perception of Cairene Arabic speakers.

CHAPTER 3: METHODS AND MATERIALS

Participants

Participants are ten adult native speakers of an Arabic dialect spoken in Alatawlah village. Alatawlah village is one among many in Zahran tribe that is located in southwestern Saudi Arabia. There were 6 males and 4 females and their ages range from 14 to 55 years with a mean of 26.3.

Participants speak only Arabic. As for English, all 10 participants identified their English as very bad. None of them is interested in learning English but some of them had to study it in school or university and some of them have to study it now at school or university. The basic criterion for choosing participants is to be very bad at speaking English.

Stimuli

This study uses nonce words because nonce words reduce the risk of participants knowing the pronunciation of the words used in the test. It employs nonce words in both the stress perception test and in the control-group test.

Test Nonce Words

There are 48 nonce words used to examine whether stressless heavy syllables affect main stress perception of Arabic speakers in English words. The 48 nonce words correspond to the phonotactics of English. There are two-, three-, and four-syllable words, and each word contains only one stressless heavy syllable and the rest of syllables are light. Main stress always falls on a light syllable in all 48 words.

Stressless heavy syllables appear in every possible position in a word. In two syllable words, a heavy syllable comes only in the second syllable position

because if it comes in the first syllable position then the second syllable will be a stressed light and this does not occur in English. For example, English can have the word ‘vivid’ [ˈvɪ.vɪd] where the first syllable is a stressed light and the second syllable is a stressless heavy but it cannot have a word like ‘vidvi’ [vɪd.ˈvɪ] where the first syllable is a stressless heavy and the second syllable is a stressed light. In three- and four-syllable words, heavy syllables appear in all syllable positions because that happens in real English words. Table 1 shows the nonce words used to elicit whether stressless heavy syllables in English words affect stress perception of Arabic speakers.

In Table 1, there are six kinds of heavy syllables used in this stress perception test. The rhymes of heavy syllables are (VC) a short vowel and a consonant, (VCC) a short vowel and two consonants, (V:) a long vowel, (V:C) a long vowel and a consonant, (VV) a diphthong, or (VVC) a diphthong and a consonant.

Control-Group Nonce Words

There are eight control-group nonce words used in this study. There are one two-syllable word, three three-syllable words, and four four-syllable words. The control-group words consist of light syllables only, hence (V) a short vowel, with main stress falls on positions where a stressless heavy syllable in the test nonce words can appear in. Hence, main stress falls on the second syllable in the two-syllable word, and on all syllable positions in three- and four-syllable words. Table 2 shows nonce words used in the control-group test.

In Table 2, there are three words that end with a stressed light syllable. This does not occur in English but this has to be used to identify what effects may influence stress perception in the test, e.g. stress the penult or no ultimate stress.

Table 1

Test Nonce Words

Type of Heavy Syllable	Two-syllable Words	Three-syllable Words	Four-syllable Words
VC	ripid ['ɹɪ.pɪd]	sandena [sæn.'dɛ.nə] kipanda ['kɪ.pən.də] senodum ['sɛ.nə.dəm]	indigina [ɪn.'dɪ.dʒɪ.nə] takenzera ['tæ.kən.zɛ.ɹə] dikimanta ['dɪ.kɪ.mæn.tə] vivinedan [vɪ.vɪ.'nɛ.dən]
VCC	kipics ['kɪ.pɪks]	bugzmeta [bʌgz.'mɛ.tə] ridundfra ['ɹɪ.dʌnd.fɹə] penocradz ['pɛ.nə.kɹædz]	bilztripica [bɪlz.'tɹɪ.pɪ.kə] masharkneta [mə.'ʃærk.'nɛ.tə] difibildsta ['dɪ.fɪ.bɪld.stə] pinaporits [pɪ.'næ.pə.rɪts]
V:	vicu ['vɪ.ku]	yubena [ju.'bɛ.nə] raneea ['ɹæ.nɪ.ə] dibifi ['dɪ.bɪ.fɪ]	sutilima [su.'tɪ.lɪ.mə] dibureta [dɪ.bu.'ɹɛ.tə] elimuka ['ɛ.lɪ.mu.kə] tolevoty [tə.'lɛ.və.tɪ]
V:C	demeez ['dɛ.meez]	needzila [nɪd.'zɪ.lə] papeenda ['pæ.pɪn.də] replidum ['ɹɛ.plɪ.dum]	weendelika [wɪn.'dɛ.lɪ.kə] baseenfela ['bæ.sɪn.fɛ.lə] minipupda ['mɪ.nɪ.pup.də] conaloteez [kə.'næ.lə.tɪz]
VV	faloy ['fæ.lɔɪ]	Naiana [naɪ.'æ.nə] rimaida ['ɹɪ.mɑɪ.də] radaboy ['ɹæ.də.bɔɪ]	saiawida [saɪ.'æ.wɪ.də] napowlita ['næ.pəʊ.lɪ.tə] rekinoyka ['ɹɜ.kɪ.nɔɪ.kə] fifibaday [fɪ.fɪ.'bæ.deɪ]
VVC	cadaiz ['kæ.dɑɪz]	dolfema [dool.'fɛ.mə] pipoynea ['pɪ.pɔɪn.kə] bashomain ['bæ.ʃə.mem]	eitbrikila [ɛɪ.'brɪ.kɪ.lə] barolweba ['bæ.ɹool.wɛ.bə] likimowbna ['lɪ.kɪ.məʊb.nə] trilikaraid [tɹɪ.lɪ.'kæ.ɹɑɪd]

Table 2

Control-Group Nonce Words

Type of Syllable	two-syllable words	three-syllable words	four-syllable words
V	mima [mɪ. 'mæ]	liniwa ['lɪ.nɪ.wə]	lilikina ['lɪ.lɪ.kɪ.nə]
		nimena [nɪ. 'mɛ.nə]	mineloda [mɪ. 'nɛ.lə.də]
		sitina [sɪ.tɪ. 'næ]	tinizera [tɪ.nɪ. 'zɛ.ɪə]
			tikifima [tɪ.kɪ.fɪ. 'mæ]

Procedure

Participants listen to a recording of 56 nonce words produced by a native speaker of English. After they listen to a word twice, they have three to four seconds to match the word they hear to one of multiple written words that have same spelling that matches the same heard word before moving on to the next word. If that word has two syllables then there are two written forms of that word, e.g. the word ‘ripid’ [ˈrɪ.pɪd] has the following two written forms to match to: **RI**pid or ri**PID**. If it has three syllables then there are three written forms and if it has four syllables then there are four written forms of that word. The difference between written forms of a single word is that each syllable is written in bold capital letters once, starting from the first syllable, while other syllables of that same word are written in non-bold small letters. On two papers stapled together, Participants mark a word that matches the heard one. Figure 2 shows four examples of how test nonce words look on the two papers each participant gets. See Appendix A for a complete list of those words.

R ipid	ri PID		
K ipanda	ki PANda	kipan DA	
T Akenzera	ta KANzera	takan ZEra	takanze RA
P Enocradz	pe NOcradz	peno CRADS	

Figure 2. Sample of test nonce words on test papers.

CHAPTER 4: RESULTS AND DISCUSSION

Introduction

Results of stress perception test indicate that Arabic-speaking learners of English tend to perceive stressless heavy syllables in English words as stressed when main stress falls on light syllables.

Stressless Heavies Perceived Stressed

Even though only light syllables bore stress in the nonce words, participants perceived stressless heavies as stressed in 42% of the cases; some stressless lights were misperceived as stressed as well, though in only 26% of cases (Figure 3). These results clearly show heavies tend to be perceived as stressed even when they're stressless and lights tend to be perceived as stressless even when they are stressed. Also, both stressless heavies and stressless lights were incorrectly perceived as stressed but stressless heavies were perceived as stressed far more than stressless lights were.

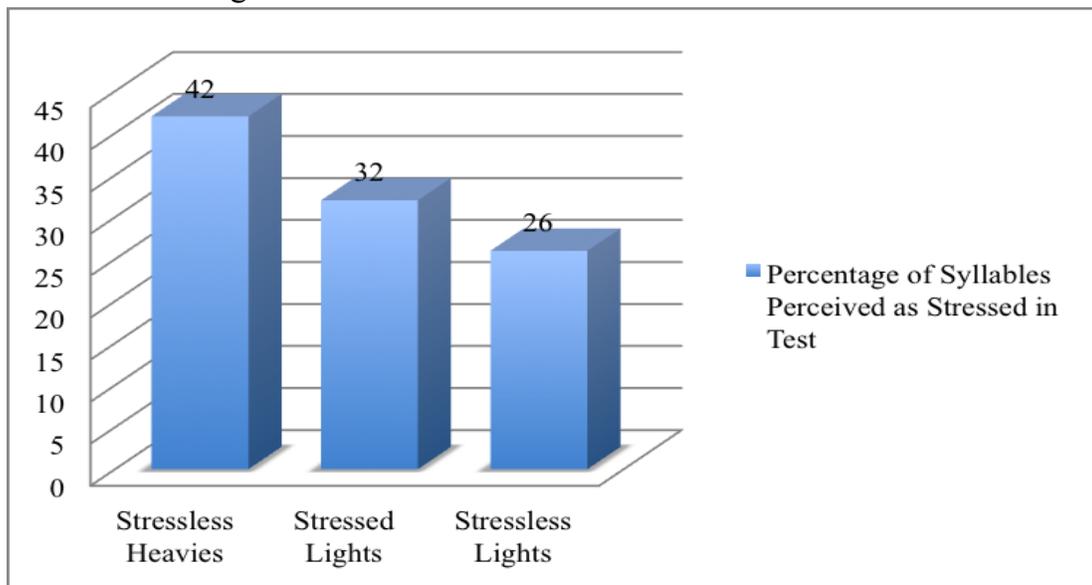


Figure 3. Percentage of stressless heavies, stressed lights, & stressless lights perceived as stressed.

For a detailed list of how many times each syllable in each word was perceived stressed, see Appendix B. Now, comparisons of stressless heavies against stressed lights and stressless heavies against stressless lights are shown in the next two sections.

Stressless Heavies vs. Stressed Lights

There were 50% stressless heavies and 50% stressed lights in the 48 test nonce words. Based on these data, 48 stressed lights should be perceived as stressed 100% because they are stressed. Participants do not have any difficulty perceiving light syllables as stressed since stress rules in their Arabic dialect show that light syllables can receive main stress in Arabic words. Results of stressless heavies as opposed to stressed lights show that stressless heavies were perceived as stressed more than stressed lights were. Stressless heavies were perceived as stressed about 12% more than stressed lights were (Figure 4).

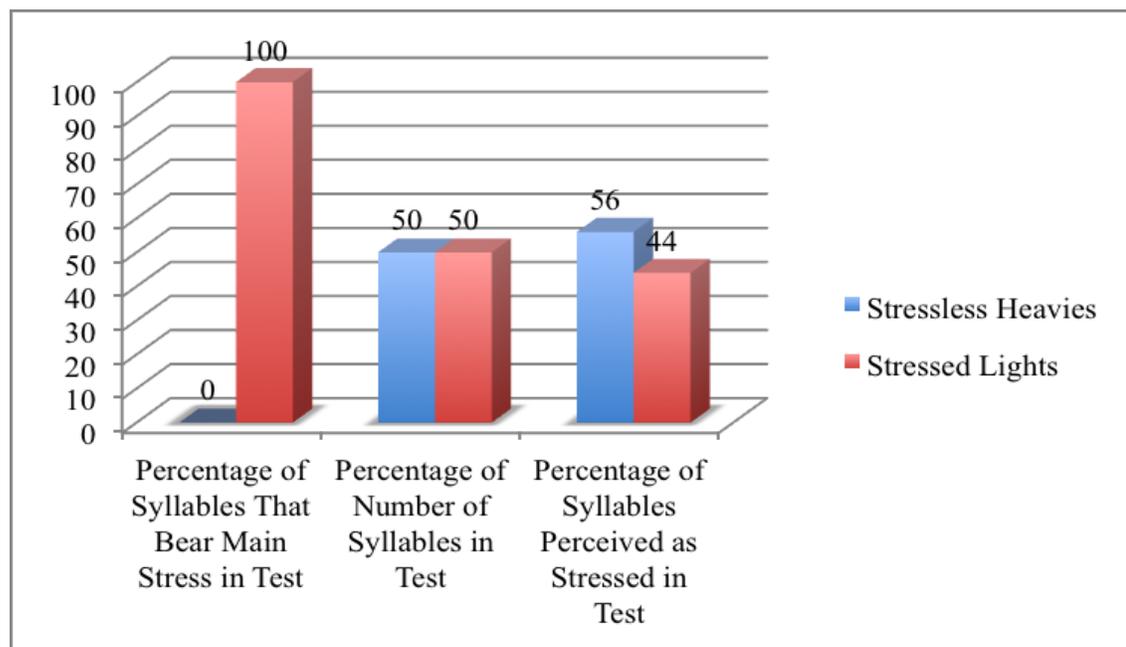


Figure 4. Stressless heavies in contrast to stressed lights.

Again, if stressless heavies would not affect stress perception, we could not have had a result of stressless heavies perceived as stressed 56% when they were actually not as opposed to stressed lights perceived as stressed 44% when they actually were. It is as if participants perceive stressless heavy syllables as syllables that bear main stress when they do not. This is evidence that stressless heavy syllables in English words affect stress perception of Arabic-speaking learners of English.

Stressless Heavies vs. Stressless Lights

There were 58% stressless lights versus 42% stressless heavies in the test. Participants must have perceived stressless heavies as stressed more than they did stressless lights otherwise the result that stressless heavies affect stress perception in the previous section is not true. The results of stressless heavies in contrast to stressless lights show that participants perceived stressless heavies as stressed far more than they perceived stressless lights as stressed. Participants perceived stressless heavies as stressed 62% while they perceived stressless lights as stressed 38% (Figure 5).

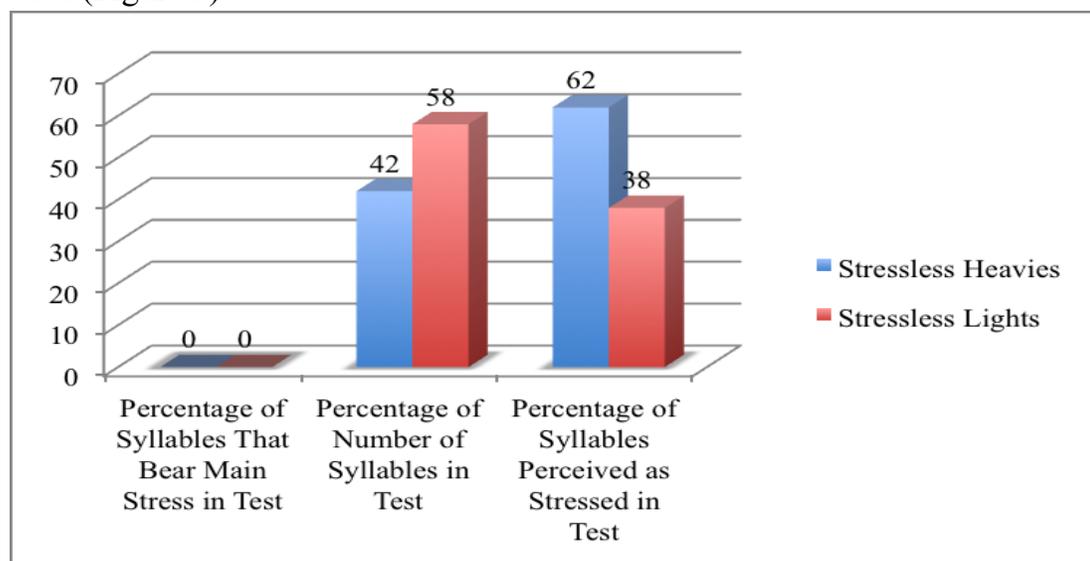


Figure 5. Stressless heavies in contrast to stressless lights.

Figure 5 shows that stressless heavies were perceived as stressed more often than stressless lights, even though there were substantially more stressless lights in the test. This supports the result shown in the previous section that stressless heavy syllables attract stress in the perception of Arabic-speaking learners of English.

Conclusion

This chapter showed that participants perceived stressless heavies as stressed even though they were not and stressed lights as stressless even though they were not, which was evidence that stressless heavies affect stress perception of Arabic speakers. Also, showing that participants perceived stressless heavies as stressed more than they perceived stressless lights as stressed supported the result that heavy syllables tend to be perceived as stressed even when they are stressless.

CHAPTER 5: CONCLUSION

Outcome of Study

Stressless heavy syllables affect main stress perception of adult Arabic-speaking second language learners of English. When an Arabic speaker from Alatawlah village in Albaha city in Saudi Arabia hears an English word like ‘vivid’ [ˈvi.vɪd], he/she might perceive the second syllable as the stressed one. That is, he/she might likely perceive the stressless heavy syllable [vɪd] as stressed instead of perceiving the really stressed light syllable [ˈvi] as stressed.

The result that stressless heavy syllables in English words affect Arabic speakers’ stress perception might extend to other languages Arabic speakers learn. So, when a Saudi speaker is learning any stress language, with light and heavy syllables, where main stress falls on a light syllable in a word, he/she may likely perceive stress on any stressless heavy syllable in that word.

Avenues for Future Studies

This study found out that stressless heavy syllables in English words affect Arabic speakers’ stress perception. An interesting follow-up study would examine whether stressless heavy syllables also affect stress *production* in second language learners. Altmann (2006) suspects that this might be the case for Arabic speakers and she states that this needs more robust investigation. Future researchers may do this by having Arabic speakers, who speak the same Arabic dialect, listen twice or thrice to a native English speaker’s recording of two-, three-, and four-syllable nonce words that correspond to English phonotactics and have only one heavy syllable, one stressed light syllable and the rest are stressless lights in each word. Afterwards, while recorded, participants produce these words and the researcher

listens to the recording of speakers' production and investigates whether stress is produced on stressless heavy syllables or not.

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APPENDICES

APPENDIX A: NONCE WORDS ON TEST PAPERS

name:	age:		
M Ima	mi M A		
L Iniwa	li N Iwa	lini W A	
N Imena	ni M Ena	nime N A	
S Itina	si T Ina	siti N A	
L Ilikina	li L Ikina	lili K Ina	liliki N A
M Ineloda	mi N EloDa	mine L Oda	minelo D A
T Inizera	ti N Izera	tini Z Era	tinize R A
T Ikifima	ti K Ifima	tiki F Ima	tikifi M A
R Ipid	ri P ID		
K Ipanda	ki P ANda	kipan D A	
T Akenzera	ta K ANzera	takan Z Era	takanze R A
P Enocradz	pe N Ocradz	peno C RADS	
D Ifibildsta	di F Ibildsta	difi B ILDsta	difibild S TA
M Asharkneta	ma S HARKneta	mashark N Eta	masharkne T A
C Onaloteez	co N Aloteez	cona L Oteez	conalo T EEZ
P Apeenda	pa P EENda	papeen D A	
V Icu	vi C U		
Y Ubena	yu B Ena	yube N A	
S Utilima	su T Ilima	suti L Ima	sutili M A
N Aiana	nai A na	naia N A	
N Apowlita	na P Owlita	napow L Ita	napowli T A
F Ifibaday	fi F Ibaday	fifi B Aday	fifiba D AY
T Rilikaraid	tri L Ikaraid	trili K Araid	trilika R AID
P Ipoynca	pi P OYNca	pipoy n CA	

SAN dena	san DE na	sande NA	
VI vinedan	vi VI nedan	vivi NE dan	vivine DAN
DI kimanta	di KI manta	diki MAN ta	dikiman TA
PI naporits	pi NA porits	pina PO rits	pinapo RITS
RI dundfra	ri DUND fra	ridund FRA	
DE meez	de MEEZ		
NEED zila	need ZI la	neddzi LA	
WEEN delika	ween DE lika	weende LI ka	weendeli KA
RA neea	ra NEE a	rane A	
ELI muka	e LI muka	eli MU ka	elimu KA
DI bureta	di BUR eta	dibu RE ta	dibure TA
SAI awida	sai A wida	saia WI da	saiawi DA
RI maida	ri MAI da	rimai DA	
CA daiz	ca DAIZ		
DOL fema	dol FE ma	dolfe MA	
BAR olweba	ba ROL weba	barol WE ba	barolwe BA
INDI gina	in DI gina	indi GI na	indigi NA
SE nodum	se NO dum	seno DUM	
KI pics	ki PICS		
BUGZ meta	bugz ME ta	bugzme TA	
BILZ tripica	bilz TRI pica	bilztri PI ka	bilztripi KA
RE plidum	re PLI dum	repli DUM	
MI nipupda	mi NI pupda	mini PUP da	minipup DA
BA seenfela	ba SEEN fela	baseen FE la	baseenfe LA
TO levaty	to LE voty	tole VO ty	tolevo TY
DI bifi	di BI fi	dibi FI	

FAloyfa**LO**Y**R**Adaboyra**D**Aboyrada**BO**Y**R**Ekinoykare**K**IInoykareki**NO**Ykarekinoy**K**A**B**Ashomainba**S**H**O**mainbasho**MA**IN**E**ITbrikilaeit**B**R**I**kilaeitbri**K**I**I**laeitbriki**L**A**L**Ikimowbnali**K**I**M**owbnaliki**M**O**W**Bnalikimowb**N**A

name:

APPENDIX B: 10 PARTICIPANTS' PERCEPTION OF TEST
AND CONTROL-GROUP NONCE WORDS

Syllable type	Two-syllable Words	Three-syllable Words	Four-syllable Words
VC	ripid ['ɾ ¹ .pɪd ⁹]	sandena [sæn ⁵ .dɛ ⁴ .nə ¹] kipanda ['kɪ ³ .pən ⁷ .də] senodum ['sɛ ⁴ .nə ³ .dəm ³]	indigina [ɪ ¹ .dɪ ³ .dʒɪ ⁵ .nə ¹] takenzera ['tæ ⁴ .kən ³ .zɛ ¹ .ɾ ²] dikimanta ['dɪ ¹ .kɪ ² .mæn ⁷ .tə] vivinedan [vɪ ¹ .vɪ ² .nɛ ⁶ .dən ¹]
VCC	kipics ['kɪ ⁵ .pɪks ⁵]	bugzmeta [bʌg ^z .mɛ ⁴ .tə ³] ridundfra ['ɾ ³ .dʌnd ³ .frə ⁴] penocradz ['pɛ ² .nə ⁵ .kɪædz ³]	bilztripica [bɪlz ⁴ .tɪ ⁴ .pɪ ¹ .kə ¹] masharkneta [mə.ʃærk ¹⁰ .nɛ.tə] difibildsta ['dɪ ¹ .fɪ ⁷ .bɪld ¹ .stə ¹] pinaporits [pɪ.nə ⁷ .pə ¹ .rɪts ²]
V:	vicu ['vɪ ⁵ .ku ⁵]	yubena [ju ⁴ .bɛ ⁴ .nə ²] raneea [ɾæ ² .nɪ ⁷ .ə ¹] dibifi ['dɪ ¹ .bɪ ⁴ .fɪ ⁵]	sutilima [su ² .tɪ ⁵ .lɪ ¹ .mə ²] dibureta [dɪ ¹ .bu ⁴ .ɾɛ ³ .tə ²] elimuka ['ɛ.lɪ ³ .mu ⁴ .kə ³] tolevoty [tə ¹ .lɛ ⁵ .və ⁴ .tɪ]
V:C	demeez ['dɛ ⁶ .meez ⁴]	needzila [nɪd ⁴ .zɪ ⁴ .lɛ ²] papeenda ['pæ ⁷ .pɪn ³ .də] replidum ['ɾɛ ⁴ .plɪ ³ .dum ³]	weendelika [wɪn ³ .dɛ ² .lɪ ⁴ .kə ¹] baseenfela ['bæ ¹ .sɪn ⁶ .fɛ ³ .lə] minipupda ['mɪ ³ .nɪ ⁵ .pup ² .də] conaloteez [kə ² .nə ⁵ .lɛ ² .tɪz ¹]
VV	faloy ['fæ ⁷ .lɔɪ ³]	Naiana [nɑɪ ³ .æ ⁴ .nə ³] rimaida ['ɾɪ.mɑɪ ⁹ .də ¹] radaboy ['ɾæ ² .dɛ ³ .bɔɪ ⁵]	saiawida [sɑɪ ⁴ .æ ⁵ .wɪ.də ¹] napowlita ['næ ² .pɑw ⁶ .lɪ.tə ¹] rekinoyka ['ɾɜ ¹ .kɪ ¹ .nɔɪ ⁷ .kə ¹] fɪfɪbaday [fɪ.fɪ ⁴ .bæ ⁵ .dɛɪ ¹]
VVC	cadaiz ['kæ ⁴ .dɑɪz ⁶]	dolfema [dɔʊl ⁵ .fɛ ³ .mə ²] pipoyncə ['pɪ ¹ .pɔɪm ⁹ .kə] bashomain ['bæ ² .ʃə ⁶ .mem ²]	eitbrikila [eɪt ² .brɪ ³ .kɪ ⁴ .lɛ ¹] barolweba ['bæ ² .ɾɔʊl ⁵ .wɛ ² .bɛ ¹] likimowbna ['lɪ.kɪ ³ .məʊb ⁷ .nə]

V	mima [mɪ ² . 'mæ ⁸]	liniwa ['lɪ ² .nɪ ³ .wə ⁵]	trilikaraid [trɪ ¹ .lɪ ¹ . 'kæ ⁶ .ɹaɪd ²]
		nimena [nɪ ¹ . 'mɛ ⁵ .nə ⁴]	lilikina ['lɪ ¹ .lɪ ² .kɪ ⁴ .nə ³]
		sitina [sɪ.tɪ ³ . 'næ ⁷]	mineloda [mɪ ¹ . 'nɛ ⁶ .lə ¹ .də ²]
			tinizera [tɪ ³ .nɪ ¹ . 'zɛ ⁴ .ɹə ² /]
			tikifima [tɪ ¹ .kɪ ¹ .fɪ ⁴ . 'mæ ⁴]

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