Social Differentiation of Inter-word Yod Coalescence in Spoken Nigerian English

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Abstract: This study attempts to track the incidence of inter-word yod coalescence and possibility of its correlation with social factors in Nigerian English. Three hundred and sixty educated Nigerian speakers of English, evenly distributed into social variables of gender, age and social class, provided data for the study. They were guided to voice five utterances and a short passage into digital recording devices. Tokens of yod coalescence produced at different word boundaries were extracted and analysed statistically, using percentages and the univariate Analysis of Variance (ANOVA). The findings reveal a very low usage (3.6%) of inter-word yod coalescence. The process was, however, more prevalent among young speakers and members of high social class who seem to be importing it into the accent. This finding points in the direction of some ongoing innovation in the NigE accent, which possibly suggests the onset of socially conditioned phonetic-phonological variation.

Key words: Yod coalescence, Nigerian English, sociophonetics, social variable, assimilation

1. Introduction
It is an incontrovertible fact that Nigerian English (NigE) exists. And just like other New Englishes, it has developed some language features of its own, such as sounds, intonation patterns, sentence structures, words and expressions; and has also developed some distinct rules of language in communication (Platt et al., 1984). NigE therefore, possesses features that qualify it as a distinct variety of English comparable to the American, Australian, Scottish and other varieties. However, the concept of NigE still requires proper characterization, identification, standardization and codification. As Jowitt (1991:29) puts it, “of course, ‘the accepted norms of usage is precisely what is at issue.”

This paper is another attempt at extending the frontier of research on this variety of English, especially from sociophonetic perspective. The study shall attempt to answer the following questions:

(i) To what extent is inter-word yod coalescence attested in NigE?
(ii) Is yod coalescence across word boundaries socially differentiated in NigE?

2. Yod Coalescence in English

The term ‘yod’ derives from Hebrew and is used to denote the palatal glide /j/. In English phonology, this phoneme is present in all C__/u/ (in-between consonant and /u/) contexts at the underlying level, but manifests in different forms at the surface level, depending on the phonetic environment the lexical item and the variety of English involved (Glain, 2012; Simo Bobda, 1994, 2007). First, it is deleted (this is called yod dropping) in many varieties of English, after palatals (including palato-alveolars), e.g. 
chew /ʧu:/; after /r/, e.g. rude /ru:d/; in Cl (consonant + l) sequence, e.g. blue /blu:/; and after alveolars (especially in General American (GA)), e.g. new /nu:/.

Second, it may be retained (this is called yod presence) after other consonants like labials, velars and labiodentals, as in beauty /bju:ti/, cute /kju:t/, few /ʃu:/, etc. (Wells, 1982). This, again, depends on variety and variation. Lastly, it may coalesce with other sounds (this is called yod coalescence), especially in an unstressed syllable, e.g. tissue /'tʃu:/, gradual /'ɡræʤuəl/, though now extending to stressed syllables as in words like tune, seduce, pronounced as /'ʧu:n/, /sɪ'dʒu:s/ respectively.

Yod coalescence, therefore, is a sub-category of place assimilation whereby alveolar sounds /s, z, t, d/ fuse with a following palatal glide /j/, either within a word or across word boundaries to become palato-alveolar /ʃ, ʒ, ʧ, ʤ/ respectively, as in issue /ɪʃu:/ becoming [ɪʃu], educate /edʒʊkeɪt/ becoming [edʒʊkeɪt], miss you /mɪʃu:/ becoming [mɪʃu] and did you /dɪd ju:/ becoming [dɪʤu] (Hannisdal, 2006). The term, “yod coalescence,” is a recent coinage for this process by Wells (1982; 2000) who limits its occurrence to /t/ + /j/ and /d/ + /j/ sequences, as in situate /sɪtʃueit/ → [sɪʧueit] and educate /edʒʊkeɪt/ → [edʒʊkeɪt] respectively. Gimson (1980) and Cruttenden (2001), on the other hand, refer to it as coalescence, and extend its application to instances of /s/ + /ʃ/ and /z/ + /ʒ/ sequences, as in miss you /mɪʃu/ and sees you [sɪːʒu] respectively. The same process is called palatalisation by Roach (1992) and Shockey (2003). It has been described as a process of simplification, a device by which consonant clusters are simplified in order to achieve or at least approach the preferred CV structure (Hannisdal, 2006; Lutz, 1991).

Specifically, there are three possible positions where the process is found in different
varieties of English. It may occur in an unstressed syllable within a word, e.g. *education* /ˌedʒʊˈkeɪʃn/, *statue* ['stæʃu] (as in many varieties of English, e.g. RP and GA); it is also found in a stressed syllable within a word, e.g. *Tuesday* /ˈʧuːzdeɪ/, *dew* /ˈʤuː/, as in GA, Australian English, Irish English and, of late, RP, Scottish and New Zealand Englishes amongst others; its occurrence is also possible across word-boundaries, especially in rapid, casual speech, e.g. *could you?* [kʊʤu], *what you* [wɒʧu] (Cruttenden, 2008; Farnetani, 1999; Glain, 2012; Hannisdal, 2006; Simo Bobda, 1994 Wells, 2008).

Diachronically, yod coalescence dates back to the 17th and 18th centuries when the unstressed sequences of /tʃ/, /dʒ/, /sʃ/ and /zʃ/ coalesced, following borrowings from French (Gimson, 1980), thereby yielding, for instance, the following:

/sʃ/ - /ʃ/ ocean, special, issue.
/zʃ/ - /ʒ/ occasion, measure, treasure.
/tʃ/ - /ʧ/ nature, virtue, picture.
/dʒ/ - /ʤ/ soldier, gradual, educate.

This process, according to Wells (1997), subsequently spread to many other words and brought about the 20th century innovation whereby yod coalescence now extends to stressed syllables and across word boundaries.

This study focuses on yod coalescence across word boundaries (herein referred to as inter-word yod coalescence) in Nigerian English.

3. Inter-Word Processes in Nigerian English

Words said in isolation, on most occasions, do take different forms and shapes in connected speech. This is because the pronunciation of a word in connected speech is subject to the influence of other adjacent sounds, especially at morpheme or word boundaries. A number of studies on assimilatory processes in NigE, in this regard, have identified certain cross-word features that characterise NigE speech. Laver (1968), for instance, found an overwhelming tendency for regressive assimilation (e.g. *live coal* [laɪf kɔʊl]), absence of progressive assimilation of voice, extensive cases of assimilation of place involving plosives and fricatives (e.g. *not possible* [nɒp pɒsɪbæl]) and presence of regressive voicing assimilation (e.g. *make them* [meɪt dem], *black bird* [blæg bɔːd]). Jibril (1982) further claimed that all cases of assimilation involving place of articulation alone affect nasals only (e.g. *in case* [ɪn kɛs], *in may* [ɪm mɛt]); assimilation of manner are restricted to alveolar consonants (e.g. *wɔl laɪk*), *don’t*
like [dɒl laɪk], and that regressive assimilation of voice affects final plosives only. Josiah (2009) is another study on assimilation which found that instances of progressive assimilation of voice, place or manner of articulation, as well as nasalisation are normal occurrences in NigE speech. Oladipupo (2014) examines connected speech processes in NigE and argues that regressive devoicing, progressive devoicing, nasal assimilation and consonant elision are prevalent in NigE, cutting across ethnic and social considerations; whereas progressive voicing, alveolar stop assimilation, yod coalescence, t-voicing, smoothing, linking and intrusive /r/ are rare.

In spite of such number of studies on inter-word processes in NigE, yod coalescence across word boundaries (which is also a category of place assimilation) has not been so elaborately discussed. Laver (1968) contended that assimilation such as this year [ðɪʃ jɪə], a case of regressive place assimilation (palatalisation) found in RP, are hardly heard in NigE. Awonusi (2004) agrees that yod dropping and yod insertion operate in NigE though, but says nothing about yod coalescence. The only available reference made to the phenomenon is Oladipupo's (2014) claim that it is a minor process in NigE.

There is, therefore, a sparse literature on this category of assimilation in NigE. However, this cross-word process has been somewhat observed in the speech of some Nigerian speakers of English where, for example, God bless you and Is that what you want? are sometimes pronounced as [gɒd bɛʃu] and [ɪz ðət wɒʧu wɒnt]. This observation is what motivated the investigation of this phenomenon in NigE. This study therefore, attempts to track the incidence of yod coalescence across word boundaries in spoken NigE, using sociophonetic approach, an aspect of phonological inquiry which Huber and Brato (2008) say is under-researched in the outer circle varieties of English but may turn out to be an essential component in the description and codification of NigE. The purpose is to establish its extent of use and possible correlation with social variables of gender, age and class in spoken NigE.

4. Sociophonetics

The term, ‘Sociophonetics,’ which is a blend of Sociolinguistics and Phonetics, was first adopted by Deshaies-Lafontaine (1974). It is an evolving research field that is concerned with studies that employ both sociolinguistics and phonetics methods - work at the intersection of sociolinguistics and phonetics. It attempts to demystify the Generative
Phonology’s pre-occupation with the analysis of the linguistic knowledge of the “ideal speaker-listener, in a completely homogenous community” (Chomsky, 1965:3), with no consideration for variation that exists between speakers of a language.

Sociophonetics studies socially conditioned phonetic variation in speech; specifically, variation in speech that correlates with social factors like speaker, gender, age or social class (Foulkes and Docherty, 2006). As an eclectic field, it is widely used among phoneticians to refer to descriptive accounts of variation in speech in different dialects, speech styles or speaker groups (Esling, 1991; Foulkes, 2006); and is employed among sociolinguists to refer to phonetically inclined variationist studies, pioneered by Labov, which emphasises interrelationship between speech form and social factors such as speaking style and the background or characteristics of the speaker (Labov, 1994, 2001).

Sociophonetic research is predicated on the fact that language varies, and that the variation is most evident at the level of phonetics. It is generally agreed that individuals pronounce sounds differently from one another and that it is difficult to find two identical voices or even two similar utterances of the same speaker. Thus, scholars have established that speech production can vary according to speakers’ social background; that is, their gender, age, socio-economic status and ethnicity (Labov, 1966; Trudgil, 1974), as well as their groups and social networks leaning (e.g. Eckert, 2000; Milroy, 1987). Sociophonetic variation, then, represents a pattern of behaviour learned by speakers through the experience of using language in social interaction.

Socially-conditioned variation in speech has been examined at different levels of phonetics and phonology; that is, segmental, suprasegmental and sub-segmental, though many of these research efforts overwhelmingly favour segmental categories. Studies in the sub-segmental direction have examined the effects of adjacent sounds on each other in a stream of connected speech, in terms of the relative duration, strength or temporal coordination of articulatory gestures. Nolan and Kerswill (1990), for example, discovered that assimilated forms produced by children from the lower status school were more than those produced by children from the higher status schools. Docherty & Foulkes (1999, 2005), from their work on stops in Newcastle English, also discovered variation in intervocalic and prepausal /t/ in
Newcastle and Derby, depending on a speaker’s social group.

William Labov is generally regarded as the pioneer in this tradition. Many of the methods he advanced are still employed in sociolinguistics till date. However, the applicability of the Labovian model in a multilingual environment like Nigeria has been questioned by many scholars. This is because Labov’s studies were restricted to the American speakers’ settings where most speakers are monolinguals and differing levels of proficiency in the language are not an issue. Besides, the kind of elaborate social class system upon which his studies were based is non-existent in Nigeria.

Nevertheless, that does not imply that Nigeria is a classless society. Indeed, class difference is somewhat intrinsic to the structure of any society, though at varying degrees and in terms of different factors which may include economic, cultural or political. The type of class construed in this study is socio-economic, which relates to the degree of access to income or wealth and occupation. These factors divide the society into the privileged and the less privileged. The more access people have to wealth or income, the higher their socio-economic status, international exposure and possibly, accessibility to quality education. It is against this backdrop the subjects for this study are divided into high and low socio-economic classes. It is believed that this will somewhat capture the type of social stratification existing in Nigeria.

**Table 1:** Frequency and percentage scores for Yod Coalescence

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Variants</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CL UCL</td>
<td>3 x 360</td>
<td>3 x 360</td>
<td>3 x 360</td>
<td>3 x 360</td>
<td>12 x 360</td>
</tr>
<tr>
<td>Frequency</td>
<td>31 1049 1080</td>
<td>21 1059 1080</td>
<td>33 1047 1080</td>
<td>71 1009 1080</td>
<td>156 4164 4320</td>
</tr>
<tr>
<td>% Score</td>
<td>2.9 97.1 100</td>
<td>1.9 98.1 100</td>
<td>3.1 96.9 100</td>
<td>6.6 93.4 100</td>
<td>3.6 96.4 100</td>
</tr>
</tbody>
</table>

**Keys:** CL- Coalesced; UCL- Uncoalesced
5. Methodology

The participants in the study were 360 educated Nigerian speakers of English, sampled through stratified and purposeful techniques from different language groups in Nigeria. They were evenly grouped into social variables of age (young: 16-35; adult: 36+), gender (male; female) and socio-economic class (low; high) based on the responses obtained through the questionnaires administered to them. The questionnaires contained socio-economic indices such as occupation (parents’ occupation for students and unemployed young participants) and position or level, the type of school (being attended (public or private), residential location, international exposure and access to cable television. The participants were guided to produce five utterances and a short passage (see appendix A), in which yod /j/ coalesced with /s, z, t, d/ at certain word boundaries into digital recording devices. Twelve potential inter-word yod coalescence sites extracted from the data were grouped into 4 contexts as follows:

<table>
<thead>
<tr>
<th>Contexts</th>
<th>items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. /sj/→/ʃ/</td>
<td>miss your, in case you, bless you.</td>
</tr>
<tr>
<td>2. /zj/→/ʒ/</td>
<td>has your, those young, amaze you.</td>
</tr>
<tr>
<td>3. /tj/→/ʧ/</td>
<td>what you, that you, cost you.</td>
</tr>
<tr>
<td>4. /dj/→/ʤ/</td>
<td>do you, would you, could you.</td>
</tr>
</tbody>
</table>

The recordings were transcribed perceptually and analysed statistically, using percentages and the Analysis of Variance (ANOVA). Scores were assigned to participants according to the variants produced. Each coalesced (CL) variant was allotted 1 mark, while 0 was assigned to the uncoalesced (UCL) forms. The total score for all participants in each variant was converted to a percentage, the higher percentage taken as the norm. In order to test for significance between each social category, their scores were subjected to ANOVA, at 0.05 significance level.

6. Analyses, Findings And Discussion

6.1 Incidence of Inter-word Yod Coalescence in Nigerian English

Table 1 below shows the frequency and percentage scores for yod coalescence and the uncoalesced forms. In each cross-boundary context, incidence of yod coalescence was found to be very low. Only 31 (2.9%) tokens occurred in context 1; 21 (1.9%) in context 2; 33 (3.1%) in context 3; and 71 (6.6%) in context 4. Out
of the overall 4,320 potential yod coalescence sites (taking all 360 participants into consideration: 1080 tokens in each context), only in 156 (3.6%) cases did the participants use yod coalescence. The uncoalesced variants were preferred in 4,164 instances, constituting 96.4% of the total production. These results suggest that NigE speakers rarely employ inter-word yod coalescence in their speech.

6.2 Social Distribution of Inter-word Yod Coalescence in Nigerian English

The social distribution of yod coalescence produced across word boundaries in the data was examined in order to establish possible variation in the use of inter-word yod coalescence among the speaker groups. Using the statistical package PASW statistics 18, the overall yod coalescence mean scores for participants by gender, age and class factors, were first calculated and, then, a univariate Analysis of Variance was performed (in order to test the significance of the results), with individual participants’ mean scores as the dependent variable and gender, age and class as the independent factors. The aggregated mean scores for each of the social variables are presented in Table 2.

A comparison of both genders in Table 2 suggests that, with 0.511 mean score for female speakers and 0.356 for males, female participants used inter-word yod coalescence slightly more than males. If yod coalescence is assumed to be a feature spreading socially into higher social classes, as Altendorf (2003) claims, this finding is therefore expected, particularly in view of different assertions in the literature that women’s speech tends to be more prestigious than men’s (Hudson, 1996; Labov, 1990). However, the ANOVA results (see appendix 2) show no significant variation between male and female speakers. This implies that there is no significant gender variation in relation to yod coalescence at word boundaries. Therefore, the claim that women’s speech is more prestigious than men’s does not hold sway in inter-word yod coalescence examined here.
The participants’ yod coalescence mean scores in relation to age suggest that the trend is predominant among the young than the adult speakers. A mean score of 0.706 was recorded by young speakers, while adult speakers scored 0.161. This is confirmed by the ANOVA results which reveal a significant variation between both age groups (F(1, 352) = 25.53, p = .000); which means, variation in age grade of speakers is significant relative to inter-word yod coalescence.

A comparison of the inter-word yod coalescence mean scores for low and high social class speakers also shows a wide margin between both social classes. The low class speakers scored 0.106, while the high class speakers scored 0.761. These results suggest that the incidence of yod coalescence at word boundaries is considerably higher amongst the high social class than the low social class. Predictably, the ANOVA results reveal a significant class variation in relation to the speech phenomenon (F (1, 352) = 37.054, p = .000).

The ANOVA results further show significant variations in the combination of gender and class (F(1, 352) = 7.752, p = .006), age and class (F(1, 352) = 15.354, p = .000); and gender, age and class (F(1, 352) = 6.125, p = .000) relative to inter-word yod coalescence (see appendix B). These mean that variation in each of gender and age factors, as well as in the combination of both, differs to a significant degree between the two social classes. It is clear from the above, therefore, that the significant variations observed in these interactions resulted from differences between the high and the low speakers (see appendices C, D, and E).

Table 2: Mean scores for yod coalescence according to social factors.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Age</th>
<th>Class</th>
<th>row means</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Young</td>
<td>Adult</td>
<td>Low</td>
</tr>
<tr>
<td>Male</td>
<td>0.544</td>
<td>0.167</td>
<td>0.178</td>
</tr>
<tr>
<td>Female</td>
<td>0.867</td>
<td>0.156</td>
<td>0.033</td>
</tr>
</tbody>
</table>

Column means 0.706 0.161 0.106 0.761 0.433

Grand Total

Table 2: Mean scores for yod coalescence according to social factors.
6. Discussion and Conclusion
The investigation into the incidence of inter-word yod coalescence in spoken NigE reveals a very low occurrence of this sound feature. This suggests that yod coalescence across word boundaries is not a common feature of speech in NigE. This claim appears plausible considering the fact that inter-word yod coalescence (like other connected speech processes), generally, requires greater gestural overlap which is often triggered when speech is spoken fast and sounds are linked with each other without junctures between them (Farnetani, 1999; Hannisdal, 2006); whereas, NigE speakers, according to Adetugbo (2004) and Oladipupo (2014), do not seem to have a penchant for speaking fast.

However, it was also observed that the occurrence of this speech phenomenon in the data was predominant amongst young and high social class speakers. If inter-word yod coalescence is, ordinarily, a function of speech tempo and, as earlier stated, NigE speakers hardly speak fast; then, significant occurrence of yod coalescence in the speech of these categories of speakers is unlikely to have resulted from rate of speaking. A possible source of this performance, therefore, is what Kerswill (1985) called socially differentiated CSPs (connected speech processes). Such speech features are likely to be discrete (not dependent on speech tempo) and may be adopted or avoided, because they are born out of speakers' awareness of their use. If this is the case, it suggests therefore that inter-word yod coalescence is somewhat becoming socially differentiated in spoken NigE; its emergence being championed by young and high social class speakers.

The prominence of this feature of speech amongst young speakers is understandable, in view of the claim in the literature that young people are linguistic innovators and agents of language change in a speech community (Eckert, 1997; Kerswill, 1996). They have also been described as casual and stylish in their speech, unlike adult speakers who aim at articulatory explicitness (Hannisdal, 2006; Kroch, 1978). This study, thus, compares with the trend Kerswill (1991) discovers in Cambridge English where a much higher incidence of coalescence was reported in both /d+j/ and /z+j/ environments for young speakers than older speakers.

Similarly, the significantly higher incidence of inter-word yod coalescence recorded by the high social class group in the data may be seen as a marker of social status, in view of Altendorf's (2003) claim that yod coalescence...
is a feature spreading socially into higher social classes. It is, possibly, a corollary of their social, academic, economic and international exposure or advantage over the lower social class.

Finally, since inter-word yod coalescence is yet to gain much currency in the NigE variety, as this study shows, it thus seems that young speakers and members of high social class are leading its importation to the accent. This discovery points to some ongoing innovation in the NigE accent, which possibly suggests the beginning of socially conditioned phonetic-phonological variation. And just before NigE is codified, it is pertinent that scholars search through the Nigerian speech community for the newest trends in the use of English, particularly those features that concern speech variation, in order to appropriately categorise the NigE accent.

References


Niemeyer.
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Appendix A: Data

i. Utterances

(i) You will miss your train
(ii) Has your letter come?
(iii) Those young men
(iv) What you need is a good job.
(v) Would you leave here?

ii. Passage

A. Good morning. I’d like to inquire about the advertised car
B. Yes, we have the car here. Its features will amaze you
A. Is the information about it valid?
B. Yes, of course. It is equipped with power-assisted steering, which I suppose, is the most important piece of information that you need.
A. Well, obviously, but...do you think it is really ice blue with darker blue inside?
B. Oh... yes, this is the exact colour of the car.
A. All right, then. Can I arrange a test drive for tomorrow?
B. Yes, you can have it tomorrow... It’ll cost you ten pounds in case you don’t buy it
A. Ten pounds! Could you rather make it five pounds?
B. Sorry, madam, we have a fixed price for all customers.
A. Well...in that case, I’ll be there tomorrow. Goodbye.
B. Goodbye and God bless you.
Appendix B
The ANOVA Table

Tests of Between-Subjects Effects

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<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
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<th>Sig.</th>
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<td>14.368</td>
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<td>.000</td>
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<td>2.500</td>
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<td>8.100</td>
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<td>15.354</td>
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</tr>
<tr>
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<td>352</td>
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<tr>
<td>Corrected Total</td>
<td>468.400</td>
<td>359</td>
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a. R Squared = .215 (Adjusted R Squared = .199)

Appendix C
Means: Gender * Class

<table>
<thead>
<tr>
<th>GENDER</th>
<th>CLASS</th>
<th>Mean</th>
<th>Std. Error</th>
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<td>Lower Bound</td>
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<td></td>
<td></td>
<td>Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALE</td>
<td>LOW</td>
<td>.178</td>
<td>.108</td>
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<td></td>
<td>HIGH</td>
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<td>.108</td>
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<td>LOW</td>
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</table>
### Appendix D

**Means: Age * Class**

<table>
<thead>
<tr>
<th>AGE</th>
<th>CLASS</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
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<tbody>
<tr>
<td>YOUNG</td>
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<td>.108</td>
<td>-.045 - .379</td>
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<tr>
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<td>HIGH</td>
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<td>.108</td>
<td>1.033 - 1.456</td>
</tr>
<tr>
<td>ADULT</td>
<td>LOW</td>
<td>.044</td>
<td>.108</td>
<td>-.167 - .256</td>
</tr>
<tr>
<td></td>
<td>HIGH</td>
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<td>.108</td>
<td>.066 - .490</td>
</tr>
</tbody>
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### Appendix E

**Means: Gender * Age * Class**

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<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
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<td>.152</td>
<td>-.011 - .589</td>
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<td></td>
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<td>.152</td>
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<tr>
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<td>LOW</td>
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