# Phonetic realization of a sequence with＂and＂and a word beginning with a vowel 

Kyoko Hayashi<br>Center for Liberal Arts Education，Ryotokuji University


#### Abstract

In teaching pronunciation of a sequence with＂and＂and a word beginning with a vowel，teachers usually tell their students to link the／ $\mathrm{d} /$ in＂and＂to the following vowel and to pronounce it as a single word．However，many examples that the $/ \mathrm{d} /$ in＂and＂is lost and the $/ \mathrm{n} /$ preceding it is linked to a following vowel were found in a few teaching materials．Therefore，we investigated how the sequence with the／d／in＂and＂plus a following vowel realized using a movie Hairspray as a material．It was found that more sequences were pronounced as［n］plus a vowel，which means that the／ $\mathrm{d} /$ in＂and＂was lost and the preceding／n／was linked to the following vowel，than those not using the structure being examined．Sequences in which the／d／in＂and＂was pronounced and linked to the following vowel were only about $25 \%$ of all the sequences．This tendency did not change depending on the speaker＇s age，gender，or kinds of a vowel following the $/ \mathrm{d} /$ ．Therefore，teachers need to teach their students that the $/ \mathrm{d} /$ in＂and＂can be lost and the preceding $/ \mathrm{n} /$ will be linked to the following vowel．


Keywords：linking，elision，teaching of English pronunciation

## ＂and＂と母音で始まる単語の連続における音声実現

林 響子<br>了德寺大学•教養部

## 要旨

日本人英語学習者に連続した単語の発音を指導する際，先行語の語末の子音と後続語の語頭の母音を切らずにつなげて発音するように意識させることが一般的である。したがって，andの後に母音で始まる単語が続くときには， and の $/ \mathrm{d} /$ と後続母音をつなげて発音するように指導してきた。しかしながら，and の $/ \mathrm{d} /$ が発音されずに，その前の $/ \mathrm{n} /$ が後ろの母音とつながる例が学習者用の教材にもいくつか見られた。 そこでandの／d／と後続母音の連続がどのように実現されるのかを映画Hairsprayを題材に調査した。その結果，今まで学習者に指導してきた／d／と母音の連続よりも，／d／が脱落して／n／と後続母音が連続する例 のほうがかなり多く見られた。この実現の傾向は，発話者の年齢，ジェンダー，後続母音の種類によって変わることはなかった。したがって，andの後に母音で始まる単語が続く場合，学習者には／d／が脱落し て／n／と後続母音がつながる発音があることも指導していく必要があると結論付けた。

キーワード：音連続，脱落，英語の発音指導

## I. Introduction

When we check the pronunciation of "and" in a dictionary, the phonetic sign is /ænd/, which is a citation form. However, when we pronounce "and" in daily conversations, we do not carefully pronounce each phoneme $/ \mathfrak{x} /, / \mathrm{n} /$, and /d/. Instead, weak forms of "and," that is, /ənd/, /ən/ or /n/ are generally used and when a word beginning with a vowel follows "and"; the word that follows will normally be pronounced as if it were a single word. For example, when "I" follows "and," we usually pronounce it as [әndar], thereby, not taking a pause between "and" and "I." Generally, when a word beginning with a vowel follows a word ending with a consonant, they are joined together and pronounced as a single word. This is what we should keep in mind when teaching English pronunciation to EFL (English as a Foreign Language) learners: We also tell learners that the /d/ in "and" and a vowel following it should be joined together and pronounced as a single word. However, when learners attempted a listening task in class, the sequence of "and" and "I" was pronounced as [ənar], not [əndar] and that made me hesitate whether I should teach them the elision of the /d/ in "and." So far, I have told them to join the /d/ in "and" to the vowel following /d/ every time such sequences appear; however, I have not taught the elision of /d/ in this case. When the /d/ in "and" is lost, the $/ \mathrm{n} /$ and a vowel after the /d/ will be joined and pronounced as a single word. For example, when "other" comes after "and," it is possible that the sequence of "and" and "other" will be pronounced as [ən^ðə] ], which can be the same pronunciation as the word "another," if the /d/ in "and" is lost. Should we teach EFL learners this complicated change in sounds? EFL learners majoring in the English language have to learn the mechanism of the changes in English sounds, but should teachers teach the same thing to learners majoring in physical education or science? If the case in which a sequence where the $/ \mathrm{d} /$ in "and" is lost and the $/ \mathrm{n} / \mathrm{preceding}$ it is linked to a vowel following the lost /d/ occurs frequently, we have to think about teaching the elision of the /d/ in "and" preceding a word beginning with a vowel to all EFL learners whether or not they are interested in English. This made me decide to examine the sequence with "and" and a word beginning with a vowel.

## II. Methods

## 1. Material

It is difficult to find and collect the sequence of "and" and a word beginning with a vowel in daily conversation as we cannot expect when this sequence will appear. Writing scripts that include many sequences of "and" and a word beginning with a vowel and having them read by native speakers of English is quick and easy. However, the pronunciations while reading such scripts may sound unnatural as speakers will be careful not to misread the written words when they read them. Moreover, using CDs in teaching materials for EFL learners is not a good idea as the speed of the utterances by the readers is usually slow and careful. Therefore, they pronounce each word clearly and as a result, linking, elision, and assimilations will not occur frequently, and this makes the pronunciations in teaching materials sound unnatural. We should avoid using them.

Considering the above reasons, I have chosen a movie as the material to be examined. If available, the script of the movie can be used to check and find sequences of "and" and a word beginning with a vowel before watching the movie. Moreover, conversations in movies are quite natural and similar to daily conversations. Therefore, I decided to examine the sequence of the sounds in the movie Hairspray. The reason I chose this work is that there are many characters in the cast that are not only adults, but also teenagers and, therefore, differing types of speech utterances
can be examined. Moreover, this movie contains many songs; and, therefore, sequences of "and" and a word beginning with a vowel occurring in a song can be compared with those in speech. The frequency of the sequence of "and" and a word beginning with a vowel found in the movie may not be enough; however, it would be possible to note the tendency of phonetic realization of the sequence of "and" plus a vowel.

## 2. Four Patterns of the sounds in the sequence of "and" and a word beginning with a vowel

When a word beginning with a vowel follows "and," we can derive four patterns of pronunciations for this sequence:
(1) The /d/ in "and" is pronounced and linked to a vowel in the following word.
(2) The /d/ in "and" is realized as [d], which means that the release of the tip of the tongue from the alveolar ridge is not followed through.
(3) The /d/ in "and" is lost and the $/ \mathrm{n} /$ in "and" is joined to the following vowel.
(4) The /d/ in "and" is pronounced; however, there is a pause between /d/ and the following vowel. Therefore, $/ \mathrm{d} /$ is not joined to the following vowel.

When we find sequences of "and" and a word beginning with a vowel in the dialogues and the songs in Hairspray, we carefully listen to the sounds of the sequence and decide the pattern in which they should be categorized. We will then figure out the percentage of each pattern.

## 3. Different realization of the sequence depending on the characters or vowels following /d/

As many characters appear in Hairspray, the way to pronounce the sequence of "and" plus a word beginning with a vowel may be different depending on different members of the cast. Thus, we decided to examine the pronunciation of this sequence in terms of the differences in gender ${ }^{1}$ and age. Furthermore, the pronunciation of the sequence of "and" and a word beginning with a vowel may also be affected by various kinds of vowels. For example, if /a/ follows "and," the sequence may tend to be pronounced as [ənə] rather than [əndə]; however, if /aI/ follows "and," it may be pronounced as [əndar] instead of [ənar]. Therefore, we will examine the pronunciation of the sequence in terms of the different vowels following "and" as well.

## III. Results

## 1. Proportion of each Pattern

We found 39 sequences of "and" and a word beginning with a vowel in Hairspray. As the characters sing many songs in the movie, about half of the sequences were found in the songs. The sequences in a song will be examined in the same way as those in a usual dialogue to investigate as many sequences as possible. Out of the 39 sequences, 20 were found in songs and the rest were in the dialogues.

Within 39 utterances, 8 were categorized as Pattern (1), in which the /d/ in "and" were pronounced and joined to a vowel coming after "and." Only 2 utterances were found for Pattern (2), in which the / $\mathrm{d} /$ in "and" is realized as [d] and were not joined to a vowel following "and." The highest number of utterances 25 was found for Pattern
(3), where the $/ \mathrm{d} /$ in "and" is lost and the $/ \mathrm{n} / \mathrm{in}$ "and" is joined to the following vowel. However, we found only 4 utterances in Pattern (4), in which there is a pause between "and" and the following word. The table below shows the number and percentage of each pattern.

Table 1: The number and percentage of each pattern

| Pattern | Number | Percentage |
| :---: | :---: | :---: |
| $(1)$ | 8 | $20.5 \%$ |
| $(2)$ | 2 | $5.1 \%$ |
| $(3)$ | 25 | $64.1 \%$ |
| $(4)$ | 4 | $10.3 \%$ |
| Total | 39 | $100 \%$ |

As shown in Table 1, 64.1\% of the sequence of "and" plus a vowel was realized as Pattern (3). Pattern (1) follows with $20.5 \%$ and Pattern (4) with $10.3 \%$. Only 2 sequences (5.1\%) were realized as Pattern (2). This result is surprising as I have taught learners that the / $\mathrm{d} /$ in "and" should be joined to the vowel coming after "and," which comes under Pattern (1), as mentioned in Chapter I. Considering that more than half of the sequences come under pattern (3), we should consider teaching the sequence of "and" with lost /d/ plus a vowel to learners. The following table shows the number and percentage of each pattern in dialogues and songs separately.

Table 2: The number and percentage of each pattern in dialogues and songs

|  | Dialogues |  | Songs |  |
| :---: | :---: | :---: | :---: | :---: |
| Pattern | Number | Percentage | Number | Percentage |
| $(1)$ | 3 | $15.8 \%$ | 5 | $25 \%$ |
| $(2)$ | 2 | $10.5 \%$ | 0 | $0 \%$ |
| $(3)$ | 12 | $63.2 \%$ | 13 | $65 \%$ |
| $(4)$ | 2 | $10.5 \%$ | 2 | $10 \%$ |
| Total | 19 | $100 \%$ | 20 | $100 \%$ |

As we can see, the tendency of realizing the sequence of "and" plus a vowel is similar to each other. This means that the realization of the sequence of "and" plus a vowel shows little difference whether they appear in a dialogue or in a song.

Table 3 shows the number and percentage of each pattern, divided by whether uttered by a man or a woman. ${ }^{\text {ii }}$

Table 3: The number and percentage of each pattern in terms of genderii

|  | Man |  | Woman |  |
| :---: | :---: | :---: | :---: | :---: |
| Pattern | Number | Percentage | Number | Percentage |
| $(1)$ | 2 | $28.6 \%$ | 5 | $16.1 \%$ |
| $(2)$ | 0 | $0 \%$ | 2 | $6.5 \%$ |
| $(3)$ | 4 | $57.1 \%$ | 21 | $67.7 \%$ |
| $(4)$ | 1 | $14.3 \%$ | 3 | $9.7 \%$ |
| Total | 7 | $100 \%$ | 31 | $100 \%$ |

The number of the sequence found in the dialogues said by a man is small; however, Pattern (3) had the highest frequency of the 4 patterns. The percentage shown in a dialogue said by a woman is quite similar to the one found in the whole set of sequences. Therefore, we can say that there is little difference in the tendency of dialogues said by a man and a woman.

The next table indicates the number and percentage of each pattern in terms of age.

Table 4: The number and percentage of each pattern in terms of age

|  | Adult |  | Teenager |  |
| :---: | :---: | :---: | :---: | :---: |
| Pattern | Number | Percentage | Number | Percentage |
| $(1)$ | 3 | $16.6 \%$ | 5 | $23.8 \%$ |
| $(2)$ | 1 | $5.6 \%$ | 1 | $4.8 \%$ |
| $(3)$ | 13 | $72.2 \%$ | 12 | $57.1 \%$ |
| $(4)$ | 1 | $5.6 \%$ | 3 | $14.3 \%$ |
| Total | 18 | $100 \%$ | 21 | $100 \%$ |

There is little difference in the realization of the sequence between adults and teenagers as shown in the table above. Therefore, we can say that the realization of the sequence of "and" and a vowel does not vary with age.

## 2. Effect by a following vowel

We intended to examine the pattern in which the sequence realizes itself in terms of the vowel after "and." However, as we found only 39 sequences in the movie, it was difficult to collect a sufficient number of the sequence for each vowel. /ai/, /I/, /ə/, /avə/, /Ј»/, /av/, /ov/ and / $\varepsilon /$ were found as a vowel uttered after "and"; however, only one sequence for $/ \mathrm{a} \sigma /$, $/ \mathrm{ov} /$ and $/ \varepsilon /$ and two for $/ \mathrm{a} \sigma \gamma /$ and $/ \rho_{\Sigma} /$, were found. As for $/ \mathrm{aI} /$, we found 19 sequences and the number and percentage of each pattern is shown in the table below.

Table 5: The number and percentage of each pattern for /aI/

| Pattern | Number | Percentage |
| :---: | :---: | :---: |
| $(1)$ | 5 | $26.3 \%$ |
| $(2)$ | 1 | $5.3 \%$ |
| $(3)$ | 12 | $63.1 \%$ |
| $(4)$ | 1 | $5.3 \%$ |
| Total | 19 | $100 \%$ |

The next table shows the number and percentage of each pattern for /i/d.

Table 6: The number and percentage of each pattern for /i/

| Pattern | Number | Percentage |
| :---: | :---: | :---: |
| $(1)$ | 2 | $28.6 \%$ |
| $(2)$ | 0 | $0 \%$ |
| $(3)$ | 4 | $57.1 \%$ |
| $(4)$ | 1 | $14.3 \%$ |
| Total | 7 | $100 \%$ |

Examining the two tables above, we found a similar tendency to the one found in the total series of sequences: the most sequences realized was Pattern (3) followed by Pattern (1). As for $/ \partial /$, all the 6 sequences were realized as Pattern (3).

We cannot assert that the tendency will not change depending on which vowel follows "and" at this stage. Therefore, we need to collect more sequences of "and" and a vowel and examine their realization.

## IV. Conclusion

As we have seen in the previous section, more than half of the sequences of "and" and a word beginning with a vowel were realized as [ n ] plus a vowel, which means that the /d/ in "and" was lost and $/ \mathrm{n} /$ was joined to the following vowel, in all the cases examined in this paper. However, the smaller number of the sequence was realized as [d] plus a vowel, which means that/d/ in "and" was pronounced and linked to a following vowel. The number is less than half of that of the sequence of [ n$]$ plus a vowel. This tendency was seen in all aspects: whether the sequence was in a song or a dialogue, delivered by a male or female character, and by an adult or teenager. Moreover, we could expect that this tendency would not change depending on a vowel following "and," considering that the percentage of realization of the sequences of the two vowels /ai/ and /I/ and all the 6 sequences of $/ 2 /$ were realized as [ n ] plus a vowel. Therefore, it is necessary for teachers to teach the sequence of $/ \mathrm{n} /$ and a vowel and dropping the $/ \mathrm{d}$ / in "and," and the sequence of /d/ plus a vowel, in cases when we pronounce the sequence of "and" and a word beginning with a vowel.

We understand that the number of the sequences found in Hairspray is not sufficient; therefore, we have to collect more sequences to be examined in future research. Moreover, it will be interesting to investigate the sequences of "and" plus a vowel that are found in more formal speech such as news programs and compare them with the ones found in casual speech. Furthermore, not only "and," but other words including /n/plus /d/ sequences such as "stand" or "second" should be examined. We hope to find a more accurate tendency of the realization of the sequences of "and" plus a vowel and to provide learners with useful information about pronunciations based on that tendency.

## Notes

i The reason the word "gender" instead of "sex" is used here, as in the movie, Edna, who is Tracy's mother, is played by a male actor, John Travolta. Edna's lines will be categorized as a woman's speech.
${ }^{\text {ii }}$ The lines delivered by Edna, whose role is played by John Travolta, were categorized into the dialogues said by a woman as he acts as a woman.
iii One sequence was found in a line delivered by a man and a woman at the same time. Therefore, this sequence is not included in this table and the total number of the sequence is 38 .

## References

1) Brown, A. (2014). Pronunciation and phonetics: A practical guide for English language teachers. New York: Routledge.
2) Horiguchi, T. et al (2000). Gendai eigo onseigaku. Tokyo: Eichosha Shinsha.
3) Kubozono, H. (2012). Onseigaku, oninron. Tokyo: Kuroshio Shuppan.
4) Takebayashi, S. and Saito H. (2014). Shinsouban eigo onseigaku nyumon. Tokyo: Taishukan Shoten.
(References are given according to the contribution rules of the Japan Association for Language Education and Technology.)

## Material

Shankman, A. (2007). Hairspray. Tokyo: Asmik Ace.

## Appendix

The dialogues including a sequence with "and" and a word beginning with a vowel:

| No. | Time | Speaker | Dialogue (song) | Pattern |
| :--- | :--- | :--- | :--- | :---: |
| 1 | $4: 49$ | Tracy | And I promise, Baltimore. (song) | $(1)$ |
| 2 | $6: 07$ | Miss Whimsy | And as exciting as that might sound... | $(3)$ |
| 3 | $9: 28$ | Link | And I'm...Link. | $(1)$ |
| 4 | $13: 37$ | Motormouth | And I'm Motormouth Maybelle remindin'... | $(3)$ |
| 5 | $15: 01$ | Tracy | And our first lady Jacqueline Kennedy, rats her hair. | $(3)$ |
| 6 | $15: 23$ | Edna | $\ldots$ and I came down from that cloud real quickly, ... | $(3)$ |
| 7 | $24: 28$ | Tracy | And all because he (song) | $(4)$ |
| 8 | $25: 02$ | Tracy | And I can hear the bells (song) | $(4)$ |
| 9 | $26: 46$ | Tracy | $\ldots$ and I are French kissin' (song) | $(1)$ |
| 10 | $28: 50$ | Penny | I'll go in front of you and I'll push. | $(3)$ |
| 11 | $30: 54$ | Tracy | And I'm Tracy! | $(3)$ |
| 12 | $31: 12$ | Corny | Don't need a cap and a gown (song) | $(3)$ |
| 13 | $31: 42$ | Tracy | $\ldots$ and I do absolutely nothing else! | $(3)$ |
| 14 | $32: 00$ | Corny | And if you were president, Tracy... | $(4)$ |
| 15 | $36: 27$ | Motormouth | And I'm your fabled Miss Motormouth Maybelle... | $(1)$ |
| 16 | $38: 28$ | Tracy | And out-negotiating them. | $(4)$ |


| 17 | $41: 15$ | Three girls | You should add some color and a fresh new do（song） | $(3)$ |
| :--- | :--- | :--- | :--- | :--- |
| 18 | $46: 44$ | Amber | Oh，and it＇s totally not true about her ．．． | $(3)$ |
| 19 | $48: 48$ | Seaweed | And only see the color of my face（song） | $(3)$ |
| 20 | $50: 48$ | Little Inez | I got a new way of movin＇and I got my own voice（song） | $(3)$ |
| 21 | $55: 38$ | Edna | And all mashed up against a crooner？ | $(2)$ |
| 22 | $56: 39$ | Motormouth | We＇ll use a pinch－a sugar and a dash－a spice（song） | $(3)$ |
| 23 | $57: 06$ | Motormouth | Why sit in the bleachers timid and afraid（song） | $(3)$ |
| 24 | $57: 22$ | Motormouth | And as for black，it＇s beautiful（song） | $(3)$ |
| 25 | $60: 54$ | Edna | $\ldots$ and I think we oughta call it a night． | $(3)$ |
| 26 | $66: 26$ | Tracy | And I knew that，but how could she go that far？ | $(3)$ |
| 27 | $67: 15$ | Wilbur | Your mother and I．．． | $(3)$ |
| 28 | $71: 57$ | Wilbur | And，Edna，ya got me goin＇hot and heavy（song） | $(3)$ |
| 29 | $80: 06$ | a newscaster | And our cameras also caught Tracy Turnblad．．． | $(1)$ |
| 30 | $82: 18$ | Tracy | $\ldots$ and I won＇t stop tryin＇to change them． | $(2)$ |
| 31 | $85: 27$ | Penny | And I＇m never going back（song） | $(3)$ |
| 32 | $96: 57$ | Tracy and Link | And if you try to hold me down（song） | $(1)$ |
| 33 | $98: 01$ | Penny | And if they try to stop us，Seaweed（song） | $(3)$ |
| 34 | $103: 18$ | Edna | And if you try to hold me down（song） | $(1)$ |
| 35 | $104: 36$ | Motormouth | And it＇s never comin＇back（song） | $(3)$ |
| 36 | $104: 42$ | Motormouth | And it don＇t know white from black（song） | $(3)$ |
| 37 | $106: 44$ | Amber | And I can＇t wait for tomorrow（song） | $(3)$ |
| 38 | $111: 16$ | a little girl | But now I＇m just like Gidget and I gotta get to Rome． | $\left(\begin{array}{ll}\text { And I don＇t need a Barbie doll to show me how（song）} & (3) \\ \hline 39 & 111: 57\end{array}\right.$ Tracy |

（平成28年11月28日稿）
査読終了日 平成28年12月5日

