



Types and Aspects of Neutralization

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Abstract

The current research deals with neutralization as a phenomenon to determine the function of phonetic and phonological representation while perceiving and producing speech. This is achieved through reviewing the types and aspects of neutralization. Neutralization refers to phonological rules that devastate the difference among two phonemes in specific conditions; thus, two distinct phonemes might be acknowledged phonetically by a similar phone. The study concludes that neutralization represents one of the main phonological processes in which the difference between two phonemes is vanished in a particular setting. Thus, neutralization exists when a phonemic distinction disappears in a particular phonological context.

Key words: Neutralization, marked, unmarked, component, Archiphoneme

1. Introduction

What happens when the qualification between two phones is lost in a specific situation? From a phonetic perspective, the clarification lies in the phonetic change. In the Prague School, Neutralization was viewed as a kind of resistance, and stood out from "consistent". The neutralization of differentiation in a specific area .Absolute neutralization refers to situations where underlying shape is never given a phonetic realization"(Crystal 2003:312-3).



2. Historical Background

The source of a number of concepts that are still current in Phonological Theory including Neutralization was the European Structuralism . Phonemes defined by the Prague school through oppositions, that is by pairs of contrasting sounds. The unmarked feature was indicated by a lack of that feature; for example, coronals had no place features at all. Coupled with the view that neutralization is feature deletion, the fact that produces unmarked element is derived.

Drawing on the results of studies on the perception of voicing (e.g. Raphael 1981, Slis 1986), Steriade suggests that the perceptual salience of laryngeal features in different environments depends on the acoustic properties associated with those environments. In 1990, the general explanation was by a theory which is Optimality Theory that is concerned with the relationship between proposed underlying and output representations. Optimality Theory idea's is that phonemic alphabets are the result of the interaction between surface oriented constraints with faithfulness conditions (Crystal, 2003:328).

3. Archiphoneme

3.1.The Factor of Archiphoneme

Many phoneticians in the Prague school believed that it was meaningless to compare the phoneme /p/ in French with the phoneme /p/ in English.. Since phonemes must be characterized with respect to each other, if there were a situations where just a single sound is conceivable the outcome is something which is not a true phoneme. For example, in front of /t/ in English, the only nasal consonant possible is /n/, not either /ŋ / or /m/ - there are no words like */K₁mt/ or */paŋt/. Thus, in some sense we can't tell weather this sound is an /n/, /m/ or an /ŋ /, only that it is nasal. So the Prague school linguists proposed the idea of an archiphoneme, a sound that doesn't have all of its specifications. (S. Nathan, 1984:4)



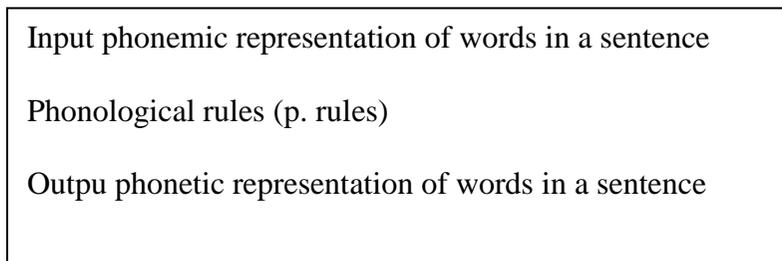
3.1.2. Archiphoneme and Trubetzkoy's viewpoint about neutralization

Neutralization forms are one of the cornerstones in the Prague School phonology. The idea was most clearly developed in the work of N.A. Trubetzkoy as he states with simple fact that segment can appear in parallel distribution,..... but there is a possibility: in Trubetzkoy's words(1936: 187), " opposition which are relevant only in particular positions, because only in these positions can one or the other member appear (i.e. neutralized members), whereas in other positions either one or the other appears" (i.e. contrasted members).

In a position of Neutralization, according to Trubetzkoy, it is not in fact either phoneme that actually occurs, but what he calls an **Archiphoneme**: " the totality of properties that are common to two phonemes. An archiphoneme then is the sum of properties in common to two (or more) phonemes, and it appears in the position(s) of neutralization (Lass 2003: 40 –1).

4. Neutralization and Optimality Theory

"The Optimality theory created or developed in mid 1990s concerning with the connection between proposed underlying and output representations. An INPUT representation is related with a class of hopeful OUTPUT representations, and different sorts of channel are utilized to assess these output and select the one which is ideal" (Crystal 2003 : 328). We can explain this idea as follows:



The implementation of this rule can be explained as follows:

Phonemic	' write'	' writer'	' ride '	' rider '
Representation	/ raɪt /	/ raɪt + ə /	/ raɪd /	/ raɪd+ ə /
Apply rule	NA*	↓	NA	↓

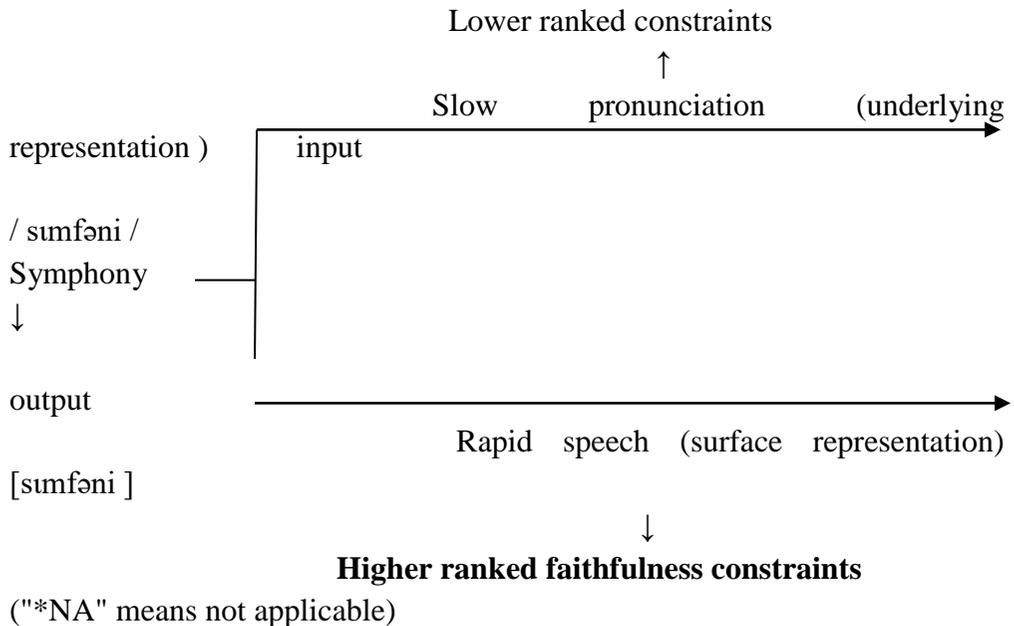


Phonetic Representation [rɑt] [rɑfə] [rɑd] [rɑfə]

The input to the p- rules is the phonemic representation; the p-rule apply to the phonemic strings and produce as output the phonetic representation. (Fromkin, 2003: 314-5).

The determination happens using an arrangement of well-formedness limitations positioned in a progressive system of importance in a language specific premise, with the goal that a lower positioned imperative might be a bused to fulfill a higher positioned one. Along these lines, there is a connection between the class of steadfastness imperatives (which required identity amongst input and output) and the class of limitations which force confinements on conceivable arrangements of sounds (Crystal 2003: 328).

The application of the ranked constraints in the optimality theory is illustrated as follows:





5. The Structure of Phonological Oppositions

In Praguian terms, the phonemic system of a language isn't only a stock of differentiating fragment classes, however an arrangement of resistance. These of course have phonetic (or phonemic) content; but most importantly, from the standpoint of linguistic analysis, they form a network of formal structures. In Trubetzkoy's view, the interlocking system of oppositions takes priority over the phoneme inventory: the major role in phonology is played not by the phonemes themselves, but by the oppositions they enter into. "Every phoneme has a quantifiable phonemic substance simply because the framework demonstrates definite order or structure" (Trubetzkoy 1939 [1969] : 67f). An opposition in a phonemic system is not merely the fact that two phonemes exist which have distinctive function. Rather, since the phonemes themselves are structures, it is their components that determine the opposition. Any pair of phonemes has a basis of comparison, consisting not only in the properties they differ in, but also they share. (Lass, 1984: 41).

5.1. Opposition: Neutralizable and Constant

Opposition refers to etymologically critical contrasts between units. In phonology, it is utilized where differentiates between particular features of sound, or amongst nearness and non attendance of a feature, are alluded to as resistances (Crystal 2003: 327). A consistent resistance exists when its individuals can occur in every single conceivable positions, e.g. wherever /p/ might be found, in a language , an appear differently in relation to / b / will likewise be found, in English , the /t/ v. /d/ refinement is neutralizable in light of the fact that in a few positions there is no such difference, the restriction being acknowledged by a similar sound, as when /t/ takes after begning /s/, e.g. stick does not appear differently in relation to *sdick. (Crystal 2003: 328). In constant phonological opposition, segments appear in parallel distribution (as the initials of **pat** , **cat** , **tat**), in which case they are potentially distinctive.(Lass 1984: 40)



6. Neutralization and Overlapping

Overlapping is a phonological term which alludes to the possibility that a phone might be appointed to more than one phoneme. This idea was presented by American structural linguists in the 1940s.

Overlap of phonemes was said to be “partial” if a given sound is doled out to phoneme A in one phonetic situation and to phoneme B in another (i.e. settings are different) . A case of incomplete overlap is found between /r/ and /t/ in some vernacular of English , where both are acknowledged by the tap [ɾ] in various setting : [r] → [ɾ] after dental fricatives, as in through; /t/ → [ɾ] between vowels, as in bitter.

The Overlapping would be “complete” if progressive occurrences of the sound in a similar setting are allocated once in A, and in some cases to B, (i.e. settings are the same) . A case of complete overlap happen on account of [ə], which may remain for most occurrences of English stressed vowels, when they occur in unstressed positions (e.g. telegraph – telegraphy, where the first and third vowels reduce to [ə]) (Crystal, 2003:331).

7. Assimilation and Neutralization

It is to be noted that the alveolar has a relatively high frequency of word final occurrence, especially when in flexional, and are particularly apt to under neutralization as redundant oppositions in connected speech. As always phonemic oppositions having been neutralized, the sense of an utterance may be determined by the context, e.g. /ranʁkwɪklɪ / (ran or rang quickly). (Gimson, 1980:291) . The common n of m-n-ŋ > ŋ word finally is the result of final nasal weakening. Under lenition m-n-ŋ are produced sometimes as nasal glides, with incomplete oral closure. Since there is a stronger tendency for the listener to perceive these nasal glides as velar nasals than as nasals at other points of articulation. The perception – based sound change m,n, ŋ >N> ŋ occurs, (N = a nasal glide) (Blevins,2004:122)

A stop with laryngeal constriction is either produced without oral stricture, due to lenition of the oral gesture, or , the same stop is produced with anticipation of the laryngeal gesture giving rise to a glottal stop perfect (Blevins, 2004:120) as in / raɪppeəz / (right or ripe pears or pairs), or, with a neutralization to a labio–dental articulation, / greɪp vaɪn / (great or grape



vine) . Assimilation process has been applied only with the form (great vine), and only through this process, it (i.e. great vine) is neutralized with the form (grape vine). So, neutralization here occurs through assimilation (Gimson, 1980:291).

8. What is Neutralization

Neutralization is a term which refers to phonological rules that devastate the difference between two phonemes in specific conditions; thus, two distinct phonemes might be acknowledged phonetically by a similar phone. (Fromkin 2003: 588). Nathan on the other hand defines Neutralization as the situation where two phonemes, under certain circumstances, share an allophone(Nathan,1984:126). While Crystal says that Neutralization is a term utilized as a part of phonology to portray what happens when the refinement between two phonemes is lost in a specific situation(Crystal,2003:312).

9. Patterns of Neutralization

9.1.Neutralization of Phonemes

/ t , d / : [f] neutralization

In some English dialects / t / and / d / are both articulated as voiced flaps between vowels as in " writer and rider". A third (non- phonemic segment sharing properties of the others, but with some of its own. The intervocalic / t / : / d / is an alveolar tap [f] . It has the alveolar articulation and complete closure of / t , d / , the voice of /d/ and a "rate" feature – very brief contact - all its own (Lass 1984: 05).

/ m , n / : [m] Neutralization

Another case concerns the allophones of /m/ and /n/ before /f/ or /v/ in words like “symphony” and “infant”. The nasal consonant in each case is likely to be [m] in rapid speech, i.e. a labio - dental sound anticipating the labio – dental [f] here again, /m/ and /n/ are not opposed, so that the sound could be allocated to either the /m/ or the /n/ phoneme. In practice, since in a slow pronunciation the [m] sound would tend to be used in “symphony” and the [n] sound in infant, a phoneme differentiation is usually made. (Gimson, 1980:53)



9.2 Neutralization of Clusters : / s / Plus Plosives / p, t, k /

Words like “spil”, “still”, “skill”, many writers have pointed out, are to be transcribed with /b,d,g/ instead of /p,t,k/. (Roach,). When /p,t,k/ follow an initial /s/, any way, they are realized with no aspiration even when stressed. Thus, in the case of such words as spin, steam, scum, we have three plosive phonemes which lack the aspiration often characteristic of /p,t,k/, but which do not have the voice which sometimes accompanies /b,d,g/. Since /p,t,k/ are never opposed to /b,d,g/ following /s/ in this position, the words might, therefore, be transcribed phonemically either as /spɪn , sti:m, skʌm / or as /sbɪn , sdi:m, sgʌm / without ambiguity (Gimson, 1980:53).

9.2.1 Close Front and Close Back Vowels

There are two vowels that are usually found in feeble syllables, one close front (in the general region of i: and ɪ) and the other close back rounded (in general region of u: and U). The happy words, finishing off with - y , - ie or -ee , have a vowel between "kit" / ɪ / and "fleece" / i: /.(Collins, 2008: 24). In strong syllables it is nearly simple to recognize i: from ɪ , u: from U , however in weak syllables the distinction isn't so certain. For instance, in spite of the fact that it is sufficiently simple to choose which vowel one hears is “beat” or “bit”, it is considerably less simple to choose which vowel one hears in the second syllable of words such as, “easy” or “busy”. In present – day BBC articulation, however, the issue isn't so clear. There is vulnerability, as well, about the comparing close back rounded vowels. If we look at the word “good to eat” and “food to eat”, we should inquire as to whether “to” is articulated with the vowel phoneme U of “good” or the u: phoneme of “food”. Once more, which vowel comes in “to” in “I want to”? One basic element is that the vowels being referred to are more similar i: or u: when they go before another vowel, less so when they go before a consonant or pause. You should see one more farther thing: except for maybe a couple extremely simulated cases, there is extremely no probability in these settings of a phonemic differentiation amongst i: and ɪ , or amongst u: and U . adequately, at that point, the two qualifications, which without a doubt exist inside strong syllables, are neutralized in weak syllables of BBC articulation. In what capacity would it be advisable for us to interpret



the words “easy” and “busy”? we can utilize the potential outcome of our phoneme images such as following: i:zi, bizi

The vowel i is neither the i: of “beat” nor the ɪ of “bit” and isn't conversely with them. We can set up a comparing vowel u that is neither the u: of “shoe” nor the U of “book” but a weak vowel that offers the attributes of both. (Roach, 2000:84).

9.2.3 Neutralization of Weak Forms

The decrease and obscuration of the unaccented structures that words which are phonetically and phonemically isolate when said in isolation might be neutralized under powerless emphasize. Such neutralization causes have no confusion in view of the higher rate of redundancy of significant signals in English; it is just seldom that the setting will permit an assortment of understanding for any one prompt provided by an unaccented word form. The cases of neutralization which follow might occur in rapid, familiar RP:

a- / ə / = unaccented are, a (and, less commonly, her, or, of)

She wants a dog

The books are mine

b- / əv / = unaccented have (aux.), of

Some of one

The boys have eaten fish

c- / ər / = unaccented are, or

Ten are under

Ten or under (less rapidly, / / for or)

d- / ə / = unaccented the, there

There seems a chance

The seams are crooked

e- / s / = unaccented is, has, does

does or is) ?helikeWhat's = s')

(sah = s') ?helostWhat's

f- / z / = unaccented is has, does

s'erehW ti tup eh ? (seod ylnommoc ssel 'sah = s')



s'erehW gniog eh ? (si = s')

g- / əz / = unaccented as, has

Howmuchhashedone?

Asmuchashecan

h- / ən / = unaccented and, an

Onand off

On an off – chance

i- / n / = unaccented and, not

Didn't he do it? / dɪdnɪ: /

He did and he didn't / hɪ dɪd ni: dɪdnt / (Gimson, 1980:284)

9.3 Absolute Neutralization

It refers to cases where an underlying form is never given a phonetic realization (Crystal 2003: 313). Defective distribution of ten results from language change (McMahon, 2002: 87). Absolute neutralization means that [ju:] in "cube" and [ju:] in venue are derived from distinct underlying vowels (back unrounded i, i,ʌ) (McMahon, 2000:89).

If we assume underling / ə / in harmony harmonious , this will tense and shift to / əu / in harmonious. Absolute neutralization is involved and the underlying representation will not be equivalent to the lexical representation of the underived form.

This can be illustrated in the following.

Input	harmony	/ ha:məni/
	↓	↓
p-rules	(derivation)	vowel shift
	↓	↓
output	harmonious	/ ha:məʊniəs



10. Conclusion

It is a fact beyond dispute that neutralization represents one of the main phonological processes in which the difference between two phonemes is vanished in a particular setting. In other words, it is the process that results in the cancellation of contrast between phonological units. Having a look at the following example, one can show the contrast between /t/ and /d/ where it is lost or neutralized when they occur intervocalically. Similarly /b, d, g/ in syllable final stop are devoiced. As a result the contrast between /p/ and /b/ as in cap and cab is lost or neutralized. In a word-initial environment, the distinction between time and dime occurs at the beginning of a word. In an intervocalic context, one can not hear the difference between /t/ and /d/ and therefore they can never distinguish meaning in that context.

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