

## Notes on UNDERLYING REPRESENTATION

Procedure for establishing Underlying Representation (UR):

1. URs are established for morphemes, not for words. More accurately, there are URs for words, but they are simply a combination of the URs of the morphemes of a given word.
2. Principle: one UR per one morpheme (in the default case).
3. Two criteria for establishing URs:

Criterion 1: Alternations.

In the typical case one of the alternating segments is the underlying segment.

Criterion 2: Predictability.

Predictable information is supplied by phonological rules, and not stored in the UR.

Practice

1. Division into morphemes

**Morpheme (roughly): the smallest unit of meaning**, where ‘meaning’ can be lexical or grammatical.

Lexical meaning exists to something that exists in the outside world, for example, *table* is a morpheme whose meaning refers to an object that exists in the outside world. The *s* in *tables* also has a meaning, but this meaning refers to grammar, for example, we say *tables are* and not *tables is*.

Divide *nationalize* into morphemes:

Answer:

*national+ize*, where *-ize* means ‘verb’, i.e. *-ize* is a verbalizing morpheme

*nation+al+ize*, where *-al* means ‘adjective’, i.e. *-al* is an adjectivizing morpheme

*nat+ion+al+ize*, where *-ion* means ‘noun’, i.e. *-ion* is a nominalizing morpheme;  
compare also *rebel – rebell+ion*.

*nat* is a bound root that can be identified independently as a root by comparing *nat+ion* and *nat+ive*. The meaning of bound roots is hard to determine; here: *nat* is a general concept referring to ‘birth’.

Roots: free roots and bound roots.

Free roots that can occur as words, e.g. the root *taste* in the adjective *taste+ful*.

Bound roots: roots that can't occur as independent words e.g. *nat*.

Divide into morphemes: *napisala.*, *pobrudziła*

Answer: na+pis+a+ł+a, po+brudz+i+ł+a

## 2. Alternations

Alternation: exchange of segments in the same place of a given morpheme.

Example 1: the negative prefix

im+polite	[ɪm]
in+tolerant	[ɪn]
in+comparable	[ɪŋ]
	-----
	m
	n
	ŋ

[ɪ] does not alternate with any other segment, so by default [ɪ] is the underlying segment = //ɪ//. The nasals alternate due to Nasal Assimilation.

Nasal Assimilation: the nasal consonant assumes the place of articulation of the following stop or affricate.

Which of the three alternants goes into the UR?

Answer: *in+accurate* [n]. Here the nasal can't assimilate because it is not followed by a stop or affricate, so [n] must come from the UR.

CONCLUSION: the UR of the negative prefix is //ɪn//.

Example 2: Polish *chleb* 'bread' vs. *sklep* 'shop'.

## 3. Predictability

The English word *tip* is pronounced [t<sup>h</sup>ɪp], with aspirated *t*. The aspirated *t* never alternates with any other segment. If the criterion of alternations were the only criterion for establishing URs, we would have to conclude that the UR of *tip* is //t<sup>h</sup>ɪp//. This would be incorrect because the occurrence of aspiration on *t* is 100% predictable.

Aspiration: Voiceless stops are aspirated at the beginning of the syllable.

CONCLUSION: the UR of *tip* is //tɪp//, not //t<sup>h</sup>ɪp//