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UNDERLYING REPRESENTATION: NOTES

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 *nationalized* into morphemes:

Answer:

nationalize+d, where *-d* means ‘past tense’

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

Alternations:

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 [tʰɪp], 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 //tʰɪp//. 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^hɪp//

4 Exercise: *po+brudz+i+ć* [pɔ+brudʑ+i+tɕ]

[tɕ] – infinitive morpheme (like the English *to* in *to do*)

[i] – verbalizing morpheme

[brudʑ] – lexical morpheme: a noun meaning ‘dirt’

[pɔ] – prefix, perfective morpheme (in Polish: morfem trybu dokonanego)

UR

[tɕ], [i] and [pɔ] do not exhibit any alternations, so the criterion of alternations says that these forms are the URs. The criterion of predictability has nothing to say here (there is nothing that can be predicted).

Conclusion: the URs of these morphemes are //tɕ//, //i// and //pɔ//.

Establishing the UR of the morpheme [brudʑ] is much harder.

Various transcriptions (surface realizations called ‘allomorphs’) of the morpheme meaning

‘dirt’: *brud* [brut], *brudy* [brud+i], [brudʑ], [brute] (in the imperative *nie pobrudź*)

Alternations:	brut
	brud
	brudʑ
	brute

	b r u t
	d
	dʑ
	tɕ

Partial conclusions: [b], [r] and [u] do not alternate, so by the criterion of alternations they go into the UR. We must still check with the criterion of predictability. Answer: nothing to predict, predictability signs off on [b], [r] and [u]. Conclusion the UR is //bru-//. We are still missing the last consonant. The voiceless [t] and [tɕ] occur only at the end of the word, so they must be a result of Final Devoicing. Conclusion: [t] and [tɕ] are not in the UR. Now the choice is between [d] and [dʑ].

Answer: [dʑ] occurs only before front vowels, specifically, before [i] and [ɛ], as in *brudz+i+ć* [-dʑ+i-] and *o tym brudz+ie* [brudʑ+ɛ], the locative singular (abbreviated as loc.sg.) of *brud*. Front vowels constitute a context for palatalization. Conclusion: [dʑ] is an effect of a palatalization rule, specifically, the rule called Coronal Palatalization.

FINAL CONCLUSION: the UR of *po+brudz+i+ć* is //pɔ+brud+i+tɕ//