Fonetyka i fonologia
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# Syllable Structure Constraints

1. Sonority scale (Jespersen 1904):
      V (vowels) – most sonorous
      G (glides)
      L (liquids: [l] and [r])
      N (nasals)
      F (fricatives)
      S (stops) – least sonorous

2. *SSG constraint* = Sonority Sequencing Generalization (Jespersen 1904)

S  F  N  L  G  V  G  L  N  F  S

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# 3. Examples:
Polish and English are subject to the Principle of Onset Maximization:

*Tatry* [ta-trɨ], *butla* [bu-tla]
*approve* [ə-pru:v]
*supply* [sə-plaɪ]

and yet there is no maximal onset in:
Polish:
*karty* [kar-tɨ], not [ka-rtɨ];
Malta [mal-ta], not [ma-lta]
English:
*contain* [kən-teɪn], not [kə-nteɪn]
pulpit [pʊl-pɪt], not [pʊ-lpɪt]

Answer: Complex Onset is blocked by the SSG.

# 4. Suspensions (they suspend the SSG, so the SSA may apply even though there is an SSG violation):

(a) Polish *Obstruent Suspension*: the SSG is suspended for obstruents.

This means that we may have two fricatives or two stops in the onset or in the coda and we may also have a fricative before a stop in the onset and a stop followed by a fricative in the coda.
*ptak* [pt-] – two stops in the onset

*fakt* [-kt] – two stops in the coda
*schab* [sx-] – two fricatives in the onset
*wierzch* [-šx] – two fricatives in the coda
*wtorek* [ft-] – a fricative followed by a stop in the onset
wieprz [-pš] – a stop followed by a fricative in the coda

Consequently, *przestępstwo* is syllabified [pšɛ-stɛm-pstfɔ]

(b) English *s-Onset Suspension*: [s] is syllabified into the onset in violation of the SSG.

*suspend* [sə-spend]; *sustain* [sə-steɪn]

Note: only [s] and no other obstruents (unlike in Polish) can violate the SSG because *after* is [ɑ:f-tə] and *obtain* is [əb-teɪn].

(c) English *Dental Coda Suspension*: dentals (i.e. real dentals and alveolars) can violate the SSG in the coda.

| | | |
|---|---|---|
| depth [depθ] | lapse [læps] | ax [æks] |
| fifth [fɪfθ] | apt [æpt] | act [ækt] |
| cats [kæts] | helped [helpt] | sixths [sɪksθs] |

Only dentals can violate the SSG in the coda, so there are no words such as *atk*.

## 5. Collocational constraints

(a) English *Lateral Onset Constraint*:   No [tl-], [dl-], [θl-] onsets.

No words in English begin with [tl-], [dl-], [θl-] and words such as *atlas* are syllabified [æt-ləs], and not [æ-tləs], even though English is subject to Onset Maximization.

(b) English *Stop Nasal Constraint*:   A stop cannot be followed by a nasal in the onset.

Consequently, *k, p, d* are not pronounced in words such as *know* [nəʊ], *pneumonia* [nju:məʊnɪə] and *Dnieper* [ni:pə] BUT [k] is pronounced in *acknowledge* because it can go into the coda of the preceding syllable [ək-nɒ-lɪdʒ].

(c) English *Stop Fricative Constraint*:   A stop cannot be followed by a fricative in the onset.

Consequently, *psychology, psychic* and similar words have [saɪ] as the initial syllable, and not [psaɪ].

## 6. Strategies for eliminating extrasyllabic consonants

*Extrasyllabic consonant*: a consonant that is not included into prosodic structure, i.e. a consonant that is not included into the syllable or into the PW (Phonological Word). Extrasyllabic consonants are automatically deleted at the end of the derivation by the Principle of Stray Erasure that says that segments must be included into prosodic structure in order to be pronounced.

|  | Feminine | Masculine | Strategy |
|---|---|---|---|
| Standard Slovak | nes+l+a [ɲɛs-la] | nies+ol [ɲiɛ-sɔl] | Vowel insertion |
| Czech | nes+l+a [ɲɛs-la] | nes+l [ɲɛ-sl] | Sonorant Syllabification |
| Eastern Slovak | nis+l+a [ɲis-la] | nis[ɲis] | no strategy: Stray Erasure |
| Polish | nios+ł+a [ɲɔ-swa] | niós+ł [ɲusw] | Adjunction to PW |

Slovak Vowel Insertion:  ∅  →  ɔ / —  *C

Note: the * means that the consonant is extrasyllabic.

Czech Sonorant Syllabification:  *C  →  $\overset{\text{N}}{\underset{\text{C}}{|}}$

Polish Adjunction:   Adjoin *C to PW.

For example, *niósł* [ɲusw] 'he carried'. Below I simplify the representations and leave out the X-slots.