

Alternation Rules by FSTs

Umut Özge

COGS 532: Theoretical Linguistics
METU, Informatics

! Vowel abstractions

define VAbs H|I|A;

! Consonant abstractions

define CAbs S|D|Y|N;

! Consonants

define C b|c|ç|d|f|g|ğ|h|j|k|l|m|n|p|r|s|ş|t|v|y|z;

! Vowels

define V a|e|i|o|u|ü|ö|ı;

```
! Consonant features
define -VOICE p|ç|t|k|f|s|ş|h;
```

```
! Vowel features
define +HIGH i|u|ɪ|ü;
define -HIGH e|a|o|ö;
define +LOW a|ö;
define -LOW e|i|ɪ|o|u|ü;
define +BACK ɪ|a|o|u;
define -BACK i|e|ö|ü;
define +ROUND ö|ü|o|u;
define -ROUND e|a|i|ɪ;
```

define ConsAlter

```
S -> s || V _ , , S -> 0 || \V _ , ,  
N -> 0 || _ .# . , , N -> n || _ ? , ,  
Y -> 0 || ~[V|H|A] _ , , Y -> y || [V|H|A] _ , ,  
D -> t || %-VOICE _ , , D -> d || \%-VOICE _ ;
```

```
define ARule  A -> %-HIGH & %-ROUND & %+BACK || %+BACK \V* _ ''  
A -> %-HIGH & %-ROUND & %-BACK || %-BACK \V* _ ;
```

```
define HRule
```

```
H -> %+HIGH & %+ROUND & %+BACK || [%+BACK & %+ROUND] \V* _ , ,  
H -> %+HIGH & %+ROUND & %-BACK || [%-BACK & %+ROUND] \V* _ , ,  
H -> %+HIGH & %-ROUND & %+BACK || [%+BACK & %-ROUND] \V* _ , ,  
H -> %+HIGH & %-ROUND & %-BACK || [%-BACK & %-ROUND] \V* _ ;
```

```
define RemMorphBound    [\\% ^* % ^:0 \\% ^*]*;
```

```
push RemMorphBound
```

```
push ConsAlter
```

```
push HRule
```

```
push ARule
```

```
read lexc tr-nom-example-v3.lexc
```

```
compose net
```


