# Morphology III

Forrest Davis

September 23, 2025

Fall 2025 FSEM CORE S119: Language as Human Nature

Colgate University

### **Turkish Morphology**

```
[denizdzikde] 'in a little ocean'
[evdzikden] 'from a little house'
[eve] 'to a house'
[elim] 'my hand'
[diʃler] 'teeth'
```

 Turkish expresses in one word what English does in many words

### **Turkish Morphology**

```
[denizdzikde] 'in a little ocean'
[evdzikden] 'from a little house'
[eve] 'to a house'
[elim] 'my hand'
[diʃler] 'teeth'
```

- Turkish expresses in one word what English does in many words
- Hypothesis: Turkish words can contain many affixes, which is why they are so long

### **Turkish Morphology**

```
[denizdzikde] 'in a little ocean'
[evdzikden] 'from a little house'
[eve] 'to a house'
[elim] 'my hand'
[diʃler] 'teeth'
```

- Turkish expresses in one word what English does in many words
- Hypothesis: Turkish words can contain many affixes, which is why they are so long
- Approach: Systematically analyze more Turkish words to build a lexicon of morphemes and a set of morphological rules to characterize the data.

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

 Step 1: Pick a word, identify the part of the word's meaning you want to find a morpheme for

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
$[di \int ler]$	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: Pick a word, identify the part of the word's meaning you want to find a morpheme for
- Step 2: Gather up all the words that share that par of the meaning

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: Pick a word, identify the part of the word's meaning you want to find a morpheme for
- Step 2: Gather up all the words that share that par of the meaning
- Step 3: Find the largest (continuous) sequence of phones they have in common. That's most likely the morpheme

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

• Step 1: [denizdzikde] 'in a little ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand' •
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	ʻin a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [deniz] 'an ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [deniz] 'an ocean'
  - [denize] 'to an ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [deniz] 'an ocean'
  - [denize] 'to an ocean'
- **Step 3**: [deniz] = 'ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

• Step 1: [denizdzikde] 'in a little ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
$[{\it evdziklerimizde}]$	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [evdzikden] 'from a little house'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [evdzikden] 'from a little house'
  - [evdziklerimizde] 'in our little houses'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [evdzikden] 'from a little house'
  - [evdziklerimizde] 'in our little houses'
- **Step 3**: [dzik] = 'little'

[denizdzikde]	'in a little ocean' ■	Step 1: $[denizdzikde]$ 'in a
[evdzikden]	'from a little house'	little ocean'
[eve]	'to a house'	
[elim]	'my hand'	
[difler]	'teeth'	
[deniz]	'an ocean'	
[denize]	'to an ocean'	
[evden]	'from a house'	
[elde]	'in a hand'	
[evdziklerimizde]	'in our little houses'	

[denizdzikde]	'in a little ocean'	•	Step 1: $[denizdzikde]$ 'in a
[evdzikden]	'from a little house'		little ocean'
[eve]	'to a house'		Step 2:
[elim]	'my hand'		этор <u>г</u> .
[difler]	'teeth'		
[deniz]	'an ocean'		
[denize]	'to an ocean'		
[evden]	'from a house'		
[elde]	'in a hand'		
[evdziklerimizde]	'in our little houses'		

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [elde] 'in a hand'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- Step 1: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [elde] 'in a hand'
  - [evdziklerimizde] 'in our little houses'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

- **Step 1**: [denizdzikde] 'in a little ocean'
- Step 2:
  - [denizdzikde] 'in a little ocean'
  - [elde] 'in a hand'
  - [evdziklerimizde] 'in our little houses'
- **Step 3**: [de] = 'in'

[denizdzikde]	'in a little ocean'
[evdzikden]	'from a little house'
[eve]	'to a house'
[elim]	'my hand'
[difler]	'teeth'
[deniz]	'an ocean'
[denize]	'to an ocean'
[evden]	'from a house'
[elde]	'in a hand'
[evdziklerimizde]	'in our little houses'

 Summary: We've posited three morphemes in Turkish

- [deniz] = 'ocean'
- -[dzik] = 'little' (a suffix)
- -[de] = 'in' (a suffix)
- We have also uncovered something about order of morphemes in Turkish. The diminutive suffix ([dzik]) is added before the locative case marker ([de]).

#### Step Back and Wonder

- You probably don't speak Turkish, and you probably didn't know anything about it until right now.
- Part of how we can even engage in this process of identifying morphemes in an unfamiliar language is the fact that language is rule governed, and languages make use of similar processes (e.g., suffixation)
- There are patterns just waiting to be found!
- You could imagine another world, where the behaviors of a different language were so foreign as to be unrecognizable, but that's not the case! Why not?

#### **Teammates**

G1	G2	G3	G4	G5
Sadie	Maddie	Laila	Daniel	Zoe
Grace	Kate	Marino	Josh	Michael

G6	G7	G8	G9
Alyssa	Sammy	Sofia	Hayden
Tessa	Idona	Chloe	Stella